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Abstract

Job creation schemes (JCS) have been one important programme of active labour market policy (ALMP) in Germany for a long time. They aim at the re-integration of hard-to-place unemployed into regular employment. A thorough microeconometric evaluation of these programmes was hindered by the fact, that the available (survey) datasets have been too small to account for a possible occurrence of effect heterogeneity. However, identifying effect heterogeneity can help to improve the design and implementation of future programmes. Hence, we use an administrative dataset of the Federal Employment Agency, containing over 11,000 participants to analyse the employment effects of JCS on an individual level. Whereas in a previous paper we analysed these effects with respect to group-specific and regional heterogeneity, we focus here explicitly on effect heterogeneity caused by differences in the implementation of programmes. In particular, we first evaluate the effects with respect to the economic sector in which the JCS are accomplished. Second, we analyse if different types of promotion lead to different effects. And finally we examine if there are varying effects which can be attributed to different implementing institutions. The results are rather discouraging and show that JCS are in general not able to improve the re-integration chances of participants into regular employment.

Keywords: Evaluation – Job Creation Schemes - Employment Effects – Sectoral Heterogeneity
JEL Classification: H43, J68, C13

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1 Introduction

The purpose of active labour market policy (ALMP) in Germany is the permanent integration of unemployed individuals into regular employment. Several types of programmes are accomplished by the Federal Employment Agency (FEA) which aim e.g. at human capital transfer, qualification, social stabilisation and an increase of the individual mobility. Although substantial amounts of the budget have been spent on these programmes in recent years, their success has been questioned, since unemployment in Germany is still rising. Job creation schemes (JCS) have been the second most important ALMP programme after vocational training in the late 1990s and early 2000s in terms of promoted individuals and spendings. The measures are some form of subsidised employment for unemployed persons with disadvantages on the labour market and aim at the stabilisation and qualification of these individuals. Programmes have to be of value for the society and additional in nature which means that only activities are promoted which could not be executed without the subsidy. Even though this is understandable in order to avoid substitution effects, it is also a drawback since the occupations are not allowed to offer experiences which are comparable to regular employment. Additional criticism regarding JCS arises because they lack explicit qualificational elements leading e.g. to a formal degree. Therefore, their value in terms of increasing the re-integration of unemployed persons into regular employment has to be evaluated thoroughly. In a previous study (see Caliendo, Hujer, and Thomsen (2005a)) we have focussed on group-specific and regional effect heterogeneity and the results have shown that the average effects for the participating individuals are disappointing. For most of the groups the effects are insignificant and for some groups the effects were negative. Only one group (long-term unemployed) benefited from participation.

In this paper we explicitly focus on effect heterogeneity caused by differences in the implementation of programmes. By doing so we want to identify possible sources causing good (or bad) effects, helping to improve the design and implementation of programmes in the future. JCS can be car-

ried out by different implementing institutions from the PUBLIC and the NON-COMMERCIAL sector as well as by private businesses. The measures include jobs in nine different economic sectors, like AGRICULTURE, CONSTRUCTION AND INDUSTRY or OFFICE AND SERVICES. Furthermore, they may differ with respect to the type of support (REGULAR vs. ENFORCED promotion). In this paper we evaluate the effects for the participating individuals with respect to these three possible sources of effect heterogeneity. Our empirical analysis is based on administrative information of the FEA on all participants who have started a JCS in February 2000. Additionally we have a sample of unemployed persons who were eligible in January 2000 but did not participate in February. The ratio between treated individuals and untreated individuals is approximately 1:20.

The effects of JCS with respect to programme heterogeneity has been analysed already in Hujer, Caliendo, and Thomsen (2004). We extend these results in three important directions. First, we are able to use regular (unsubsidised) employment as an outcome variable. In our former analysis we were only able to estimate the individual effects in terms of not being unemployed or job-seeking, which is clearly less informative. Second, we also extend our observation period until December 2002. For that reason, we are able to evaluate the programme effects up to almost three years after programmes have started, and to provide implications about the effects in the mid run. Third, we evaluate the effects with respect to the type of promotion and the implementing institution. As a place in ENFORCED promotion is in general more expensive, it has to be asked whether the effects justify the additional costs. The analysis of the effects with respect to the implementing institution may help to identify efficiency differences between PUBLIC and NON-COMMERCIAL providers.[1]

The paper is organised as follows: We start with some facts about job creation schemes in Germany in the following section. After that, we present the dataset and describe the groups in analysis with additional descriptive results in section three. In section four we present and discuss our evaluation approach and implement it in section five. The employment effects of job creation

[1] Due to the small numbers of programmes supported in private businesses they had to be excluded from analysis.

schemes with respect to the programme sectors, types of promotion and types of providers are presented in section six. The final section concludes.

2 Some Facts about Job Creation Schemes in Germany

JCS have been the second most important programme of ALMP in Germany regarding the expenses (3.68 billion Euro) and the number of entries (260,079 newly promoted individuals) at the begin of our observation period in 2000 (Bundesanstalt für Arbeit, 2002a). They can be promoted if they support activities which are of value for the society and additional in nature.[2] Additional in nature means that the activities could not be executed without the subsidy. For that reason, the majority of JCS is conducted by PUBLIC and NON-COMMERCIAL institutions, although support can also be obtained by private businesses. However, some special clauses to prevent substitution effects and windfall gains have to be regarded. Besides the social value and the additional benefit of the activities, participants in JCS in the private sector have to be from special target groups of the labour market, e.g. young unemployed without professional training, and get educational supervision during occupations.

JCS should be offered to individuals whose last chance to stabilise and qualify for later re-integration into regular employment is participation. Hence, JCS are primarily targeted at specific problem groups of the labour market, like long-term unemployed or persons without work experience or professional training.

Financial support for JCS is obtained as a wage subsidy to the implementing institution. JCS in the PUBLIC sector are conducted by the administration departments of municipalities and towns, of administrative districts, of the Federal Authority, of churches and of universities. NON-COMMERCIAL entities are mainly friendly societies, charities and non-profit enterprises. The FEA distinguishes nine different economic sectors for the implementation of programmes, like AGRICULTURE or CON-

[2] The empirical analysis is based on programmes conducted during 2000 and 2001. As the legal basis has been amended twice (2002/2004), we refer to §§ 260-271, 416 of Social Code III before 2002.

STRUCTION AND INDUSTRY.[3] Since the categorisation of the sectors was set up in the mid 1980s, the changes due to the German Re-Unification and the further labour market reforms in the 1990s and 2000s are not reflected. Due to this, several sectors are nowadays only of minor importance. A further distinction can be made regarding the type of promotion, that is REGULAR or ENFORCED. ENFORCED promotion should be granted for projects which enhance the chances for permanent jobs, support structural improvement in social or environmental services or aim at the integration of extremely hard-to-place individuals. In general, JCS should be co-financed measures where between 30% and 75% of the costs are subsidies by the FEA and the rest is paid by the provider and the subsidy is normally paid for 12 months. However, exceptions can be made in the direction of a higher subsidy-quota (up to 100%) and programmes can be extended up to 24 or even 36 months, if the JCS create the preconditions for permanent jobs, provide jobs for unemployed individuals with strong labour market disadvantages or improve social infrastructure or environment.

Potential participants have to be long-term unemployed (more than one year) or unemployed for at least six months within the last twelve months and have to be eligible for unemployment compensation. In addition, the local placement officers are allowed to place up to five percent of the allocated individuals who do not meet these conditions ('Five-Percent-Quota'). Further exceptions are made for young unemployed (under 25 years) without professional training, short-term unemployed (with at least three months of unemployment) placed as tutors, and disabled who could be stabilised or qualified.

A further important point to mention is how selection into programmes is accomplished, i.e. why do certain unemployed persons participate while others do not. This is also of particular interest for the choice of the comparison group. Participation in JCS results from placement by the caseworker. The unemployed individual is offered a specific job in one sector where a place is available and which

[3] The sectors are agriculture, coast protection and land reclamation, forestry, transportation, construction and industry, supply facilities, office and services, community services, and other.

fits her characteristics as assessed by the caseworker in cooperation with the potential participant. Thus, assignment to programmes depends on the one hand on the assessment of the individual's need of assistance by the local labour office, and on the other hand on the availability of jobs in JCS at a specific point of time. The responsible caseworker can cancel the programme before the regular end if the participating individual can be placed in the first labour market. If an unemployed rejects a programme offer for the first time, the labour office can stop the UI benefits for up to twelve months, in case of repeated rejection the unemployed persons may lose their UI entitlement.

3 Dataset, Groups of Analysis and Selected Descriptives

3.1 Dataset

Our dataset is constructed from four administrative sources of the FEA. To describe the individual situation in the labour market for participants and nonparticipants, we use information from the job-seekers data base (Bewerberangebotsdatei, BewA) and an adjusted version for statistical purposes (ST4). They contain information on all unemployed individuals and individuals threatened by unemployment registered at the labour offices. The datasets provide each individual's unemployment status information together with important information on the job-seekers socio-demographic situation, qualification details and labour market history. This information is amended by attributes of subsidised employment programmes (ST11) as for example the economic sector, or the programme duration. These three sources build up a prototype version of the programme participants master data set (Maßnahme-Teilnehmer-Gesamtdatei, MTG).[4] For this reason, the MTG contains numerous attributes to describe individual aspects on the one hand, and provides a reasonable basis for the construction of the comparison group on the other hand.

As the local labour market environment is an important determinant of programme assignment and impacts, we complete our set of attributes by regional dummies according to the classification

[4] The final version of the MTG contains information on all ALMP programmes of the FEA, but was not available when the samples were drawn.

of similar and comparable labour office districts by the FEA (see Blien *et al.* (2004)). This classification categorises the 181 German labour office districts into twelve comparable clusters which can be condensed into five types for strategic purposes. The comparability of the labour office districts is built upon several labour market characteristics. The most important criteria are the underemployment quota and the corrected population density (see Caliendo, Hujer, and Thomsen (2005b) for further details). Because all East German labour office districts (except the city of Dresden) belong to the first cluster, we use the finer classification (Clusters Ia to II) for the East, whereas for West Germany we rely on the coarser one (II to V). The clusters are in order of the labour market prospects described starting with the worst labour market environment (Ia).

For the construction of the outcome variable of interest (regular and unsubsidised employment) we use a fourth source, namely the Employment Statistics Register (Beschäftigtenstatistik, BSt). The BSt includes information on all persons registered in the social security system (employees and participants of several ALMP programmes). As we define only regular employment as a success[5], we have to identify spells of regular employment without further promotion. To do so, we amend the outcome variable by excerpted information of the final version of the MTG on the individual's time spent in ALMP programmes.

Our empirical analysis is based on a cross-section of participants in JCS who have started their programmes in February 2000. Since participants and nonparticipants have to be homogeneous in the basic characteristics which determine eligibility to the programme under examination, the comparison group is drawn as a random sample of unemployed job-seekers from January 2000. By doing so, we ensured that the nonparticipants were eligible for participation in February 2000, but did not participate in that month. Due to a clearly different situation of the German labour market in East and West Germany, we separate our analysis with respect to these regions. Regarding previous empirical findings (Hujer, Caliendo, and Thomsen, 2004) we separate the analysis additionally by

[5] All other kinds of subsidised employment or participation in ALMP programmes are defined as a failure.

gender. Furthermore, we excluded the local labour market of Berlin from the analysis. The special situation of the capital city would require a separate evaluation of the effects. However, the small number of participants aggravates the interpretation of the results. Our final sample contains 11,151 participants and 219,622 nonparticipants for whom we observe the employment status until December 2002 which is almost three years after programmes have started.

3.2 Groups of Analysis

Although the FEA distinguishes nine different sectors for the implementation of JCS, there are only four sectors of major importance: Agriculture, Construction and Industry, Office and Services and Community Services. As the sectors Coast Protection and Land Reclamation, Forestry, Transportation and Supply Facilities are only of minor importance, they are summarised and added to the category Other, leaving us with five sectors for analysis. Figure 1 presents the number of participants in these sectors in West and East Germany. To allow a reasonable estimation and interpretation of treatment effects, groups with less than 100 participants are excluded from analysis. This is relevant for women in West Germany participating either in the sectors Agriculture (41) or Construction and Industry (36). Leaving participants in the sector Other apart, the majority of men in both regions participate in sectors Agriculture (584 participants in West Germany / 925 in East Germany) and Construction and Industry (317/416). The largest share of female participants in both parts can be found in the sector Community Services with 503 participants in West Germany and 1,810 participants in East Germany. The smallest share of participants is employed in Office and Services' occupations. On the one hand this may be due to specific abilities needed for these kind of jobs, which most of the participants may not have. On the other hand, this may also be caused by the fact that occupations in this sector are not additional in nature and of value for the society. Since these are the preconditions for a promotion of JCS (see section 2) this would explain the relatively low share of participants in this sector. This first glance

already shows significant differences in the allocation to the different sectors not only between the regions but also between men and women.

Fig. 1: Number of Participants in the Programme Sectors

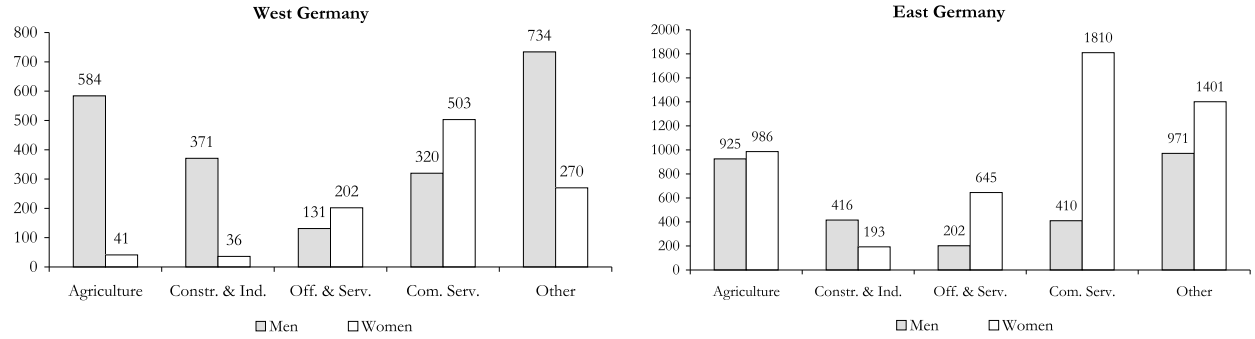
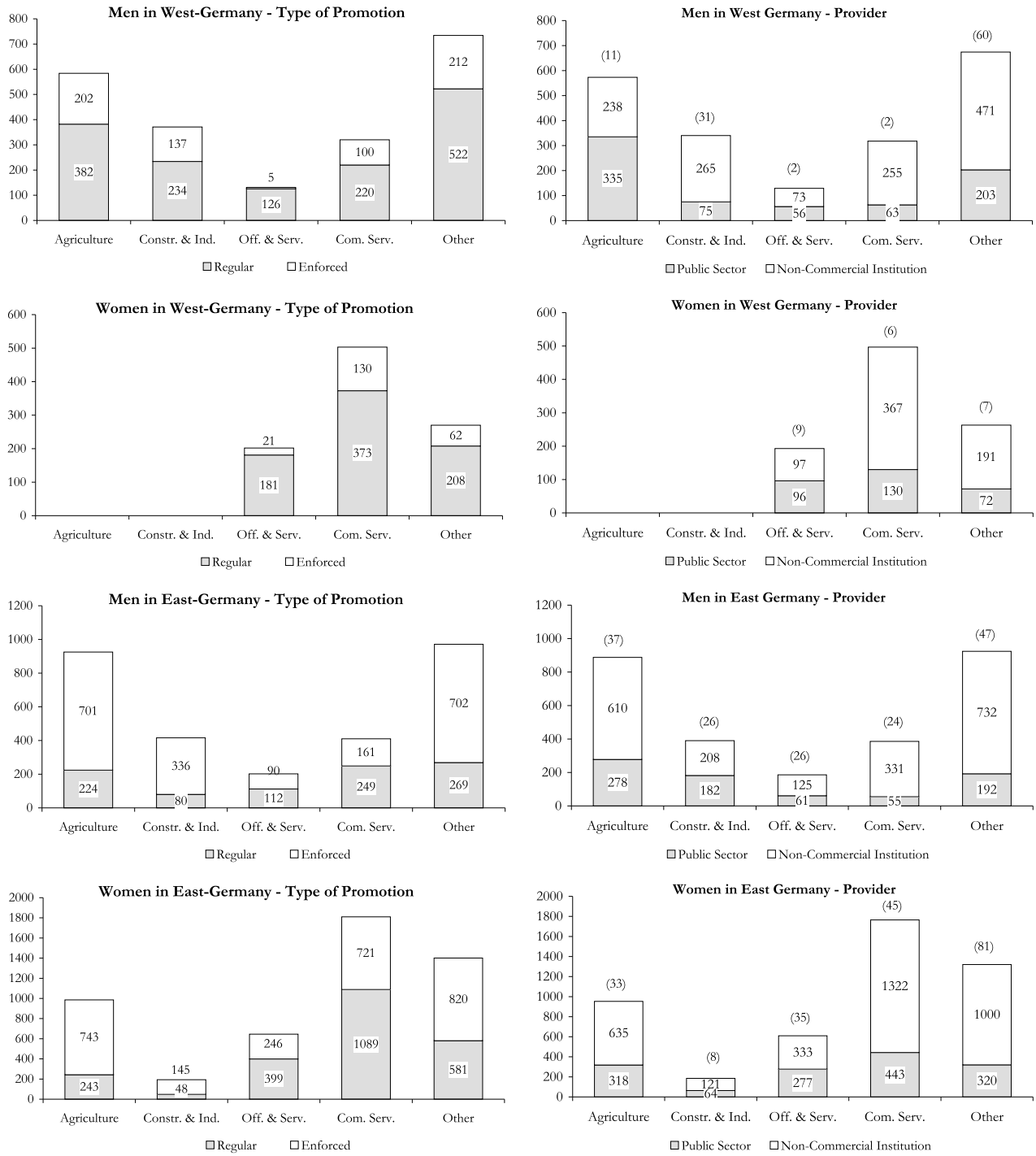


Figure 2 additionally differentiates the number of participants in the different sectors by type of promotion and provider. Comparing the shares of participants with regular and enforced promotion (left hand side of the figure) shows notable differences between East and West Germany and reflects the worse labour market situation in East Germany. While in West Germany the majority of programmes (over 70%) is implemented as regular promotion, in East Germany the picture is inverted. Here, 68% of the men and 53% of the women are in enforced promotion. Since the major difference between the two types of promotion is a higher subsidy to the implementing institution, it is not surprising that JCS are on average more expensive in East Germany. While the average monthly costs per participant have been 1,419 Euro in West Germany, 1,518 Euro have been spent on average per participant in East Germany in the year 2001 (Bundesanstalt für Arbeit, 2002b). The share of regular promotion is highest in the sectors Office and Services and Community Services. In West Germany over 96% of the male participants in the first sector receive regular promotion and 90% of the women. In Community Services the numbers are 69% for men and 74% for women. In East Germany the share of participants with regular promotion is much lower than in West Germany (55% / 62% of the men / women in Office and Services, 61% / 60% in

Community Services) but still much higher when compared to the other sectors.

Fig. 2: Number of Participants in the Sectors (by type of promotion and provider) [a,b]



[a] Left side shows the number of participants in the sectors differentiated by type of promotion (regular and enforced).
[b] Right side shows the number of participants in the sectors differentiated by provider (public sector or non-commercial institution, participants in private sector in brackets).

The graphs on the right side of figure 2 present the number of participants differentiated by providers of jobs. Due to the legal requirements of JCS (see section 2), support of programmes in private businesses is only rarely granted (number in brackets). This leads to the fact that the largest group of participants in private businesses are women in the sector OTHER in East Germany (81), and the smallest group are two male participants in the sector OFFICE AND SERVICES in West Germany. Hence, we do not analyse the employment effects of this provider and exclude the concerned individuals from analysis.

What becomes obvious from the graphs is, that JCS are mainly accomplished by NON-COMMERCIAL entities, like friendly societies, charities and non-profit enterprises. Although institutions from the PUBLIC SECTOR, e.g. adminstration departments of municipalities and towns, also provide a substantial number of occupations, they only dominate the schemes in AGRICULTURE for men in West Germany. The dominance of NON-COMMERCIAL ENTITIES is not surprising, since JCS should stabilise and qualify hard-to-place individuals for later re-integration into regular employment by providing temporary occupations that do not compete with regular jobs. Those regulations are in order to avoid substitution effect and windfall gains and can most likely be met by non-commercial institutions, which have a sufficient demand for workers, do not compete with private businesses and could not provide long-run opportunities for comparable employees without the subsidy.

Let us summarise so far. The occupations between the sectors differ and there are also differences in the implementation of schemes between the two types of providers. Finally, the type of promotion is not homogenous, either, and we expect the employment effects to be heterogeneous, too. The direction of the effect heterogeneity is not clear a-priori. We have discussed already that the occupations in the different sectors differ and also require different abilities from the participants. However, it is a-priori unclear which type of occupation will improve the employment chances of individuals more. The same is true regarding the providers. Finally, also with respect to the third source of possible effect heterogeneity (the type of promotion) different arguments may be thought of.

Since one reason for ENFORCED promotion is a higher degree of 'need of assistance', it can be argued that this type should lead to better outcomes, as the costs are usually higher and the programme is more intense. On the other hand, it may also be claimed that those individuals have on average worse labour market prospects. Clearly, these presumptions can be confirmed or discarded only by empirical examination.

3.3 Selected Descriptives

Let us briefly consider the different characteristics of participants in the five sectors and compare them with the group of nonparticipants. Tables A.1 to A.4 in the appendix present means and frequencies of relevant variables with differentiation by gender, region and sector. The attributes are categorised into four types: socio-demographic information, qualification details, labour market history and regional context. In addition, the average programme duration within the sectors is added. With respect to this information, some notable differences are visible. Whereas men in West Germany experience the shortest programmes on average in the sector AGRICULTURE with 262 days, their counterparts in this sector in East Germany leave programmes on average after 325 days, i.e. approximately two months later. As already noted, only a small fraction of male participants is employed in OFFICE AND SERVICES. Furthermore, the programmes in this sector last the longest time (337 days in West Germany/ 332 in East Germany). Unfortunately, our data lacks information about the reasons for the different durations. We are unable to identify whether programme duration is determined by the planning of the caseworkers in the first place (nominal duration), or whether better alternatives for the participating individuals are obtained during programmes (realised duration). For women in East Germany, the average programme duration differs between sectors, too. The participants in CONSTRUCTION AND INDUSTRY leave the programmes on average after 290 days, whereas women in OTHER stay in programmes for nearly 341 days. In contrast to that, programme durations for women in West Germany vary hardly. Women in West Germany remain in programmes between 305

days (Community Services) and 311 days (Other). Apart from these sectoral differences, it has to be mentioned that participants in West Germany remain in programmes on average shorter than in East Germany (independently of gender). That may be on the one hand due to better alternatives on the labour market, e.g. regular job opportunities or other ALMP programmes, or on the other hand due to a different acknowledgement of programmes by the participants.

Let us now compare some selected characteristics of participants and nonparticipants in the different sectors. A first thing to note is that male participants in West Germany are significantly older than nonparticipants who are on average 43.2 years in January 2000. It can also be seen, that the age of participants varies considerably between the sectors. Whereas men in Construction and Industry and Community Services are at the begin of programmes on average about 35 years old, participants in Agriculture are already 39 and in Office and Services even about 43 which almost equals the age of nonparticipants. Looking at the results for women in West Germany shows a similar picture. Again nonparticipants are on average older (43.3 years) than the participants, independently of sectors. In contrast to that, the results for men in East Germany show quite a different picture. Participants are on average clearly older than the nonparticipants. The youngest participants (approximately 43 years) are employed in Community Services and Construction and Industry, the oldest in Agriculture (46 years) and Office and Services (49 years), whereas the nonparticipants are on average 41.7 years. Women in East Germany are the most homogeneous group with respect to the age of participants and nonparticipants. Age varies slightly between 43 years (Construction and Industry, Agriculture and Other) and 45 years (Office and Services) for participants and is on average 44 years for nonparticipants. Except for women in West Germany, participants in Office and Services are the oldest of all sectors. Although the individual's age may be expected to be an important determinant for a possible re-integration into regular employment and therefore shorter programme duration, this expectation is only partly affirmed by the results. There is a tendency that programmes last on average longer if participants are older, but

no clear pattern can be revealed. With respect to health restrictions, we find that men without health restrictions are over-represented in the sectors Agriculture and Construction and Industry when compared to nonparticipants. This is intuitively understandable since occupations in these sectors may involve some form of manual labour. The same findings emerge for men and women in East Germany.

It is quite interesting to look at the professional training of individuals in the different sectors. Participants without completed professional training are over-represented in the sectors Agriculture and Construction and Industry, whereas individuals with higher degrees are over-represented in the sectors Office and Services and Community Services. Both points are true irrespective of gender and region, even though the first point is more pronounced in West-Germany. We have mentioned already in the descriptive analysis in the last chapter, that the share of individuals without any professional training (and without certificate for secondary education) is rather low in East Germany. Most of the individuals here have at least some formal degree ('industrial training'). Clearly, this has also to be seen in relation to the higher age of participants in East Germany. The professional rank points in the same direction. Men in West Germany who are white-collar workers are over-represented in the Office and Services sector and unskilled workers are primarily found in Agriculture or Construction and Industry. White-collar females in West Germany are remarkably over-represented in Office and Services and Community Services. Taking together, this shows that higher qualified persons are more likely to be found in the sectors Office and Services and Community Services, whereas low-qualified individuals are more likely to be in Agriculture or Construction and Industry. It is quite interesting to note that nonparticipants in West Germany have on average more work experience when compared to the participants. In East Germany on the other hand the situation is much more balanced and no large differences in work experience between participants and nonparticipants are visible.

These findings confirm two expectations. First, participants and nonparticipants differ remark-

ably in their characteristics. Clearly, this has been expected and highlights once again that a simple comparison of treated and non-treated individuals will lead to selection bias. We will address this problem in the next section. Second, the participants in the different sectors have also rather different characteristics, and the estimation has to take this into account properly.

4 Choosing the Right Evaluation Approach

4.1 The Potential Outcome Framework and Selection Bias

The standard framework to think about treatment effects in the microeconometric literature is the potential outcome approach or Roy (1951)-Rubin (1974) model. In this framework an individual can choose between two states, e.g. either participating in a certain labour market programme or not. The individual then has two potential outcomes, where Y^1 denotes the outcome with treatment and Y^0 the outcome without treatment. The actually observed outcome for any individual i can be written as: $Y_i = Y_i^1 \cdot D_i + (1 - D_i) \cdot Y_i^0$, where $D \in \{0, 1\}$ is a binary treatment indicator. The treatment effect for each individual i is then defined as the difference between her potential outcomes $\Delta_i = Y_i^1 - Y_i^0$. Imbens (2000) and Lechner (2001) generalise this approach for situations where a whole range of treatments is available. However, as we are only interested in the pairwise comparison of a particular treatment to non-participation, we can constrict our description to the binary case.

The parameter of interest is the average treatment effect on the treated (ATT), defined as:

$$ATT = E(\Delta \mid D = 1) = E(Y^1 \mid D = 1) - E(Y^0 \mid D = 1). \tag{1}$$

The second term on the right hand side of equation (1) is unobservable as it describes the hypothetical outcome without treatment for those individuals who received treatment. As we work with non-experimental data, estimating the ATT by the difference in the subpopulation means of participants $E(Y^1 \mid D = 1)$ and nonparticipants $E(Y^0 \mid D = 0)$ will lead to a selection bias, since participants and nonparticipants are selected groups that would have different outcomes even in absence of the

programme. Depending on the data at hand, different evaluation strategies can be thought of (see e.g. the overviews from Blundell and Costa-Dias (2002) or Caliendo and Hujer (2005)). Basically, two categories of estimators can be distinguished. The first category of estimators relies on the so-called conditional independence assumption (CIA). The basic idea here is, that the potential outcomes Y are independent of participation D if we condition on covariates X. In fact, we need to observe all covariates that jointly influence the selection into treatment and the outcome on the labour market. Estimators that exploit the CIA are e.g. matching and regression models. If one believes that the available data is not rich enough to justify this assumption, he has to rely on the second category of estimators which explicitly allows selection on unobservables, too, like instrumental variables and selection models. Clearly, the CIA is in general a very strong assumption. Blundell, Dearden, and Sianesi (2004) argue that the plausibility of such an assumption should always be discussed on a case-by-case basis, thereby taking account of the informational richness of the data. Hence, we will do so in the following subsection.

4.2 Plausibility of the CIA

Clearly, a first thing to do is to look at the institutional set-up and the selection process into JCS as discussed in section 2. As we have seen, JCS are in general open to all unemployed persons who meet the eligibility criteria. However, assignment to programmes depends also on the individual's need of assistance (as evaluated by the caseworker). As we can access very rich and informative data from administrative sources, we are able to considerably approximate this need of assistance. To do so, we categorise the attributes into four classes. The first class contains socio-demographic variables which are important determinants of the labour market prospects, like age, marital status, number of children, nationality (German or foreigner), and health restrictions. The second class refers to the human capital of the individual (qualification variables). The attributes included cover the professional training, the occupational group, the professional rank and the work experience

of the individual. As the third class we define career variables, describing the individual's labour market history like the duration of the last employment, the duration of unemployment at the end of January 2000, the number of (successless) placement propositions, the last contact to the job center, whether the individual aspires for vocational rehabilitation, and a former programme participation. Additionally we have an assessment by the caseworker if the individual has placement restraints due to health restrictions. Finally, the last class of attributes enfolds the regional context as described above. Given this informative set of variables we henceforth argue that the CIA holds.

Choosing a proper control group is the next thing to do. Although participation in ALMP programmes is not mandatory in Germany, the majority of unemployed persons join a programme after some time. Thus, comparing participants to individuals who will never participate is inadequate, since is can be assumed that the latter group is particularly selective. Sianesi (2004) discusses this problem for Sweden and argues that these persons are the ones who do not enter a programme because they have found a job already. Therefore, we restrict our comparison group only to be unemployed and eligible at the end of January 2000 and not to participate in February 2000. The ratio of participants to potential non-participants in our data is 1:20.

4.3 Estimating Treatment Effects with Matching Estimators

Given the CIA holds and that we access to a large group of eligible nonparticipants, the matching estimator is an appealing choice. As already said, it is based on the identifying assumption that, conditional on some covariate X, the outcome Y is independent of D. It is well known that matching on X can become impossible when X is of high dimension ('curse of dimensionality'). To deal with this dimensionality problem, Rosenbaum and Rubin (1983) suggest the use of balancing scores $b(X)$, i.e. functions of the relevant observed covariates X such that the conditional distribution of X given $b(X)$ is independent of the assignment to treatment, that is $X \amalg D|b(X)$. For participants and nonparticipants with the same balancing score, the distributions of the covariates X are the

same, i.e. they are balanced across the groups. The propensity score $P(X)$, i.e. the probability of participating in a programme is one possible balancing score, which summarises the information of the observed covariates X into a single index function. Rosenbaum and Rubin (1983) show that if treatment assignment is strongly ignorable given X, it is also strongly ignorable given any balancing score. Hence, it is sufficient to assume that: $Y^0 \amalg D|P(X)$, where $\amalg$ denotes independence. In order to find comparable non-treated individuals for all treated observations it is usually additionally assumed that $Pr(D = 1 \mid X) < 1$, for all X.

Several matching procedures have been suggested.[6] The choice of the matching method involves a trade-off between matching quality and variance. First, one has to decide on how many non-treated individuals to match to a single treated individual. Nearest-neighbour (NN) matching only uses the participant and its closest neighbour. Therefore it minimises the bias but may also involve an efficiency loss, since a large number of close neigbours are disregarded. Kernel-based matching on the other hand uses more nonparticipants for each participant thereby reducing the variance but possibly increasing the bias. Finally, using the same non-treated individual more than once (NN matching with replacement) can possibly improve the matching quality, but increases the variance. We tested the sensitivity of the estimates with respect to the algorithm choice in our companion paper (Caliendo, Hujer, and Thomsen, 2005a). It turns out that the results are not sensitive and that nearest-neighbour (NN) matching with an additional caliper of 0.02 is the most favourable choice. Caliper matching can be seen as a variant of NN matching that chooses the closest neighbour in terms of the propensity score only if the difference between the scores of participant and nonparticipant does not exceed a certain threshold value, in our case 0.02.[7] Given the large sample of nonparticipants we additionally match 'without replacement'.

[6] Good overviews can be found in Heckman, Ichimura, Smith, and Todd (1998) and Smith and Todd (2005).
[7] Matching has been implemented using the Stata module psmatch2 by Leuven and Sianesi (2003).

5 Implementing Propensity Score Matching

5.1 Propensity Score Estimation

As we want to evaluate the impacts of participation in JCS in a specific economic sector, with a specific type of promotion, and with respect to the supporting institution, we have to take account for differences regarding the assignment to programmes. For example, it has become obvious from the findings in section 3.3 that higher qualified individuals are more likely to be found in the sectors Office and Services and Community Services, whereas lower-qualified ones are more likely to be in Agriculture or Construction and Industry. Hence, it can be expected that the attribute 'professional training' has a different influence on the participation probability in the different sectors. Thus, we estimate the propensity scores separately for every treatment group in analysis against the group of nonparticipants. To do so, we use binary logit models.[8] To abbreviate documentation of the propensity score estimations, we only discuss the results for the five sectors in the following.[9]

The results for the propensity score estimations for the five sectors can be found in tables A.5 (Men, West Germany), A.6 (Women, West Germany), A.7 (Men, East Germany) and A.8 (Women, East Germany) in the appendix. A first thing which becomes obvious is that the parameters of the choice estimations do not only diverge with respect to regional and gender-specific differences, but also with respect to sector specific aspects. Clearly, this has been expected based on the descriptive analysis. For example, married men (0.6680) and women (0.1677) in West Germany have a higher probability to join a programme in the sector Community Services than men (-0.2582/ insignificant) and women (-0.4877) in the East. A good example for sector-specific differences is the individuals' age. Whereas age has a negative impact on the probability for men in West Germany

[8] As we exclude groups of less than 100 participating individuals, we estimate 18 logit models for the five sectors, 29 logit models for the five sectors with respect to the type of promotion, and 26 logit models for the five sectors with respect to the type of provider. For all groups in consideration we estimate the models with respect to region and gender separately.

[9] The results of the estimations for the other groups (type of promotion, type of provider) are available on request by the authors.

to join Construction and Industry (-0.1343), it has a positive effect for them to join Office and Services (0.3791). Clearly, there are also variables that influence participation probabilities irrespective of gender and region. The number of placement propositions is a fine example as it increases the participation probabilities for men and women in both parts and all sectors. There is a strong tendency for men and women with health restrictions to participate in the sectors Office and Services or Community Services when compared to individuals without health restrictions. This makes sense as it is not very likely for people with health problems to work in the sectors Agriculture or Construction and Industry. People with higher qualifications (reference category is without completed professional training and CSE) tend to go in the sectors Office and Services and Community Services, too. For example the coefficient for West German men with college or university degree to join the sector Office and Services is 1.5608, whereas this characteristic reduces the probability to join Agriculture by a coefficient of -1.2767. The influence of professional rank works in the same direction. Individuals with a higher rank (compared to unskilled workers) are less likely to participate in Agriculture (and to a certain extent also Construction and Industry). The coefficients for the occupational groups are as expected. People who come from service professions are also more likely to join sectors Office and Services and Community Services and less likely to join Agriculture and Construction and Industry. No clear differences between the sectors can be found for the unemployment duration and the duration of last employment. The latter one decreases the participation probability for all groups in all sectors. The unemployment duration (in three classes: less than 13 weeks (reference), 13-52 weeks and over 52 weeks) has significant influence mainly in East Germany, where it increases the probability for nearly all sectors. Overall it can be stated that sector-specific differences play a major role for the participation probabilities.

5.2 Matching Quality and Common Support

Based upon the propensity score estimates and the chosen matching algorithm, we check the matching quality by comparing the standardised bias (SB) before and after matching. Since we do not condition on all the covariates but on the propensity scores, this is a necessary step to see if the matching procedure is able to balance the distribution of the covariates between the group of participants and nonparticipants.[10] The SB, as suggested by Rosenbaum and Rubin (1985), assesses the distance in the marginal distributions of the X-variables. For each covariate X it is defined as the difference of the sample means in the treated and (matched) comparison sub-samples as a percentage of the square root of the average of the sample variances in both groups. The SB before and after matching is given by:

$$SB = 100 \cdot \frac{(\overline{X}_{1t} - \overline{X}_{0t})}{\sqrt{0.5 \cdot (V_{1t}(X) + V_{0t}(X))}}, \text{ with } t \in (0, 1). \tag{2}$$

X_1 (V_1) is the mean (variance) in the treated group and X_0 (V_0) the analogue for the comparison group before matching if $t = 0$, and the corresponding values after matching if $t = 1$. For the sake of brevity, we calculated the means of the SB before and after matching for men and women in West and East Germany for the different treatments in consideration as an unweighted average of all variables (mean standardised bias, MSB):

$$MSB = \frac{1}{K} \sum_{k=1}^{K} \left\{ 100 \cdot \frac{\overline{X}_{k1t} - \overline{X}_{k0t}}{\left[\sqrt{(V_{k1t}(X) + V_{k0t}(X))/2}\right]} \right\}, \tag{3}$$

with K denoting the number of covariates. The results can be found in table 1.

Starting with the results for the five sectors, for men in West Germany we see that the overall bias before matching is between 14.77% (Other) and 23.23% (Office and Services). The matching procedure is able to achieve a significant reduction in all of the sectors and leads to a MSB after matching between 3.42% and 4.33% for four of the five sectors. The MSB after matching in the sector

[10] See Caliendo (2005) for an exhaustive discussion on how to implement propensity score matching and to test matching quality and common support.

Office and Services is still quite high (6.86%). But taking into account that this group is the smallest group of men in West Germany and the enormous reduction compared to the situation before matching, this is acceptable. For women in West Germany, the MSB is reduced from 21.76% to 5.31% in the sector Office and Services, from 18.11% to 3.07% in the sector Community Services and from 15.83% to 5.01% in the sector Other. The bias reduction in East Germany is even better, leaving us with a MSB after matching between 2.17% (Agriculture) and 5.72% (Office and Services) for men and between 1.58% (Community Services) and 5.74% (Construction and Industry) for women. Overall, these are enormous reductions and show that the matching procedure is able to balance the characteristics in the treatment and the matched comparison group.

Tab. 1: Mean Standardised Bias Before and After Matching in Programme Sectors[1]

	All Individuals		Promotion: Regular		Promotion: Enforced		Provider: Public		Provider: Non-comm.	
	before	after	before	after	before	after	before	after	before	after
West Germany										
Men										
Agriculture	18.88	3.76	19.56	4.33	19.81	5.88	19.07	5.08	18.79	5.97
Construction & Industry	22.32	3.70	19.16	5.62	26.81	5.61	–	–	21.18	4.62
Office & Services	23.23	6.86	23.10	7.01	–	–	–	–	–	–
Community Services	17.89	4.33	16.86	6.10	–	–	–	–	17.47	5.65
Other	14.77	3.42	14.82	3.16	20.67	6.29	19.05	5.25	15.08	3.48
Women										
Agriculture	–	–	–	–	–	–	–	–	–	–
Construction & Industry	–	–	–	–	–	–	–	–	–	–
Office & Services	21.76	5.31	22.01	6.07	–	–	–	–	–	–
Community Services	18.11	3.07	18.34	3.43	22.65	10.48	19.49	7.69	18.28	3.97
Other	15.83	5.01	16.63	3.81	–	–	–	–	15.40	5.52
East Germany										
Men										
Agriculture	17.02	2.17	17.53	5.23	17.46	3.18	17.53	5.80	16.86	3.26
Construction & Industry	16.65	4.02	–	–	15.73	3.76	18.11	7.98	16.20	5.74
Office & Services	25.43	5.72	27.60	7.93	–	–	–	–	26.19	7.52
Community Services	16.24	4.13	18.29	3.76	17.30	5.17	–	–	16.36	4.97
Other	11.55	3.05	17.11	4.01	11.54	3.74	13.44	6.15	11.44	3.52
Women										
Agriculture	18.10	2.14	16.95	5.23	17.92	2.92	17.45	5.27	18.25	3.02
Construction & Industry	13.11	5.74	–	–	14.17	6.10	–	–	14.66	8.25
Office & Services	17.62	3.02	18.18	9.94	17.13	4.70	18.13	9.47	17.50	4.10
Community Services	11.81	1.58	13.46	2.37	10.77	3.20	13.86	3.83	11.58	2.05
Other	11.03	2.73	13.11	3.68	12.05	2.75	13.77	3.87	10.87	3.31

[1] Groups of less than 100 participants are excluded from estimation.

For the further groups differentiated by type of promotion and implementing institution, it can be seen that the propensity score specification is able to reduce the MSB after matching for most

groups, too. However, there are some groups for which the MSB after matching is still quite high. For example, women with enforced promotion in the sector Community Services in West Germany have a MSB after matching of 10.48%. This highlights the fact that it is not always possible to find comparable individuals in the group of nonparticipants and that the matching approach is limited in such situations. Fortunately, this is only the case for very few of the groups in analysis, but has to be considered when interpreting the results.

A final thing to bear in mind when implementing matching is the region of common support between participants and nonparticipants. Clearly, matching estimates are only defined over the common support region and treated individuals who fall outside this region have to be discarded. If the share of individuals lost is high, the effects have to be re-interpreted which might cause problems for the explanatory power of the results. Table A.9 in the appendix shows the number of lost treated individuals due to missing common support. For men in West Germany we lose between zero (Construction and Industry) and 1.53% (Office and Services) of all treated individuals, which corresponds to a total loss of ten participants. For women in West Germany we lose seven observations and the numbers in East Germany are even lower with four men and five women. The picture is equally good for the further groups defined by different providers and types of promotion.[11] Hence, common support is guaranteed and not a problem for this analysis.

6 Sectoral Employment Effects

6.1 Gender and Regions

Let us start with the main effects in the different sectors, which are depicted in table 2. To allow a more accurate discussion, we present the results for six selected months only. The results over time, i.e. from February 2000 until December 2002, can be found in figures A.1 and A.2 in the

[11] One exception are women in West Germany participating in Community Services with enforced promotion. For this group we lose 14.6% of the observations. This corresponds to the finding regarding the MSB in this group and basically permits a further interpretation of the results in this group.

appendix. The results show that the expected locking-in effects vary considerably not only between the different sectors but also in both regions. Five month after programmes start in July 2000, we find significant negative employment effects for men in West Germany which lie between -15.6% (Agriculture) and -27.2% (Community Services). That means, that the average employment rate of male participants in the sector Community Services is 27.2% lower compared to matched nonparticipants. Clearly, this strong reduction is expected as nearly all participants are still in the programmes, whereas nonparticipants have the chance to search, apply for and find a new job. For women in West Germany, the effects in July 2000 lie between -19.3% (Community Services) and -22.9% (Office and Services).

The locking-in effects in East Germany are less pronounced, which may indicate that being locked into the programme does not have as much influence, since the chances of nonparticipants to find a new job are lower anyway. For men the effects are bounded between -13.3% (Community Services) and -19.5% (Construction and Industry). The locking-in effects for women in East Germany are even lower and lie between -8.7% (Agriculture) and -12.9% (Construction and Industry). Most of the participants leave the programmes after one year. In fact, in March 2001 around 80% (74%) of the male (female) participants in West Germany and approximately 91% (92%) of the male (female) participants in East Germany have left the programmes. Hence, any locking-in effect should start to fade away after that time, which is also reflected by our findings. In July 2001, the effects for all of the groups in both regions have increased, even though they are still significantly negative. The improvement is stronger in West Germany, where the effects for men now lie between -7.7% (Agriculture) and -15.5% (Office and Services) and for women between -11.3% (Community Services) and -12.9% (Other). In contrast to that, the improvement in East Germany is smaller but still visible leading to effects for men between -9.9% (Other) and -13.8% (Community Services) and for women between -6.0% (Community Services) and -10.4% (Construction and Industry). Even though this is a remarkable development, the crucial question remains if programme

Tab. 2: Sectoral Employment Effects for Selected Months[1]

		Jul 00	Dec 00	Jul 01	Dec 01	Jul 02	Dec 02
West Germany							
Men							
Agriculture	Effect	**-0.1561**	**-0.0892**	**-0.0772**	-0.0223	-0.0309	0.0086
	S.E.	0.0160	0.0166	0.0202	0.0245	0.0268	0.0256
Construction and Industry	Effect	**-0.2318**	**-0.1833**	**-0.1321**	-0.0108	0.0000	0.0243
	S.E.	0.0204	0.0232	0.0300	0.0338	0.0360	0.0330
Office and Services	Effect	**-0.2016**	**-0.2016**	**-0.1550**	*-0.0853*	*0.0930*	*0.1008*
	S.E.	0.0323	0.0315	0.0384	0.0384	0.0465	0.0486
Community Services	Effect	**-0.2722**	**-0.2057**	**-0.1203**	**-0.0886**	-0.0190	-0.0032
	S.E.	0.0317	0.0299	0.0333	0.0332	0.0314	0.0334
Other	Effect	**-0.1956**	**-0.1669**	**-0.1094**	**-0.0725**	-0.0027	0.0027
	S.E.	0.0163	0.0187	0.0232	0.0236	0.0246	0.0235
Women							
Agriculture	Effect	–	–	–	–	–	–
	S.E.	–	–	–	–	–	–
Construction and Industry	Effect	–	–	–	–	–	–
	S.E.	–	–	–	–	–	–
Office and Services	Effect	**-0.2289**	**-0.2438**	*-0.1144*	-0.0647	0.0498	0.0796
	S.E.	0.0289	0.0333	0.0480	0.0434	0.0448	0.0482
Community Services	Effect	**-0.1932**	**-0.2173**	**-0.1127**	**-0.0865**	-0.0020	0.0362
	S.E.	0.0171	0.0234	0.0270	0.0283	0.0315	0.0273
Other	Effect	**-0.2000**	**-0.2185**	**-0.1296**	*-0.0926*	-0.0037	0.0444
	S.E.	0.0249	0.0292	0.0337	0.0391	0.0423	0.0447
East Germany							
Men							
Agriculture	Effect	**-0.1427**	**-0.0984**	**-0.1146**	**-0.0605**	**-0.0714**	-0.0216
	S.E.	0.0123	0.0124	0.0140	0.0148	0.0161	0.0148
Construction and Industry	Effect	**-0.1947**	**-0.1370**	**-0.1298**	**-0.0769**	**-0.0841**	*-0.0601*
	S.E.	0.0173	0.0230	0.0237	0.0244	0.0217	0.0238
Office and Services	Effect	**-0.1343**	**-0.1343**	**-0.1144**	*-0.0746*	-0.0249	0.0199
	S.E.	0.0181	0.0240	0.0334	0.0343	0.0378	0.0360
Community Services	Effect	**-0.1327**	**-0.1425**	**-0.1376**	**-0.0860**	-0.0467	-0.0319
	S.E.	0.0218	0.0185	0.0255	0.0253	0.0279	0.0203
Other	Effect	**-0.1401**	**-0.1205**	**-0.0989**	**-0.0639**	**-0.0649**	*-0.0340*
	S.E.	0.0105	0.0113	0.0139	0.0138	0.0149	0.0164
Women							
Agriculture	Effect	**-0.0873**	**-0.0782**	**-0.0711**	**-0.0650**	**-0.0376**	-0.0183
	S.E.	0.0084	0.0094	0.0125	0.0126	0.0121	0.0144
Construction and Industry	Effect	**-0.1295**	**-0.0984**	**-0.1036**	-0.0207	-0.0415	0.0104
	S.E.	0.0233	0.0229	0.0310	0.0286	0.0320	0.0311
Office and Services	Effect	**-0.0916**	**-0.0916**	**-0.0652**	**-0.0807**	**-0.0575**	**-0.0497**
	S.E.	0.0102	0.0106	0.0174	0.0173	0.0184	0.0174
Community Services	Effect	**-0.0867**	**-0.0912**	**-0.0602**	**-0.0343**	-0.0133	*0.0232*
	S.E.	0.0063	0.0075	0.0107	0.0118	0.0126	0.0111
Other	Effect	**-0.1001**	**-0.1023**	**-0.0851**	**-0.0601**	**-0.0572**	**-0.0258**
	S.E.	0.0087	0.0066	0.0105	0.0105	0.0111	0.0131

Bold letters indicate significance on a 1% level, *italic* letters refer to the 5% level, standard errors are bootstrapped with 50 replications.
Results refer to NN matching without replacement and a caliper of 0.02.
[1] Groups of less than 100 participants are excluded from estimation.

participants have a higher employment rate at the end of our observation period in December 2002. Unfortunately, this is only true for men in West Germany who participate in the sector Office and Services (10.1%) and for women in East Germany participating in the sector Community Services (2.3%). These are the only groups who benefit from participation in terms of a higher

employment rate. For all other groups we find insignificant or negative effects. In particular we find negative effects for men in East Germany participating in the sectors CONSTRUCTION AND INDUSTRY (-6.0%) and OTHER (-3.4%) as well as for East German women in OFFICE AND SERVICES (-5.0%) and OTHER (-2.6%). Taken together, the results are rather discouraging and confirm our previous empirical findings. Participation in JCS does not increase the employment chances of individuals in most cases and has therefore to be rated as a failure. What is left to examine is if we can establish positive effects for the two different types of promotion (REGULAR and ENFORCED) and for the two different providers (PUBLIC and NON-COMMERCIAL). We will do so in the following.

6.2 Gender, Regions and Type of Promotion

Tables 3 (West Germany) and 4 (East Germany) contain the results in the different sectors differentiated by the type of promotion.[12] As discussed already, there are two types of promotion, namely REGULAR and ENFORCED. They major difference between both lies in a higher and longer paid subsidy for enforced promoted occupations in JCS. As a further aspect of ENFORCED promotion is a higher degree of 'need for assistance', it is a priori unclear, what effects are to be expected. On the one hand it may be argued, that ENFORCED promotion may lead to better outcomes, since the costs are usually higher and the programme is more intense. On the other hand, it may also be claimed that those individuals have on average worse labour market prospects.

Taking the results in July 2000 as an indicator for the magnitude of locking-in effects, an unexpected finding emerges. We would have expected that an ENFORCED promotion corresponds to higher locking-in effects. However, in West Germany, this expectation could only be confirmed for men in AGRICULTURE (-16.7% in REGULAR, -20.5% in ENFORCED promotion). For women in West Germany no strong statements are possible, since we cannot estimate effects for most of the sub-groups due to the small number of observations. In East Germany, the hypothesis is confirmed for two male groups

[12] Groups of less than 100 observations have been excluded from evaluation. The results over time for the five sectors and the types of promotion are available on request by the authors.

Tab. 3: Sectoral Employment Effects by Type of Promotion - Selected Months (West Germany)[1]

West Germany **Men**								
Sector	Type of Promotion		Jul 00	Dec 00	Jul 01	Dec 01	Jul 02	Dec 02
Agriculture	Regular	Effect	**-0.1675**	**-0.1414**	**-0.1126**	**-0.0707**	-0.0471	-0.0366
		S.E.	0.0208	0.0233	0.0279	0.0254	0.0278	0.0278
	Enforced	Effect	**-0.2050**	**-0.1550**	*-0.1100*	-0.0400	-0.0400	-0.0050
		S.E.	0.0317	0.0332	0.0461	0.0469	0.0404	0.0382
Construction and Industry	Regular	Effect	**-0.2607**	**-0.2308**	**-0.1709**	**-0.0940**	-0.0684	-0.0299
		S.E.	0.0370	0.0291	0.0407	0.0360	0.0366	0.0376
	Enforced	Effect	**-0.2482**	**-0.1752**	-0.0803	0.0000	-0.0365	0.0365
		S.E.	0.0397	0.0491	0.0566	0.0543	0.0496	0.0516
Office and Services	Regular	Effect	**-0.1520**	**-0.1680**	-0.0960	-0.0320	0.0800	*0.1360*
		S.E.	0.0381	0.0373	0.0501	0.0470	0.0643	0.0643
	Enforced	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
Community Services	Regular	Effect	**-0.2018**	**-0.1881**	-0.0688	-0.0780	0.0183	0.0275
		S.E.	0.0320	0.0357	0.0365	0.0422	0.0396	0.0385
	Enforced	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
Other	Regular	Effect	**-0.2231**	**-0.1865**	**-0.0981**	-0.0481	-0.0288	-0.0038
		S.E.	0.0199	0.0189	0.0250	0.0326	0.0285	0.0301
	Enforced	Effect	**-0.2115**	**-0.1538**	*-0.0962*	*-0.0913*	-0.0721	-0.0288
		S.E.	0.0344	0.0384	0.0431	0.0410	0.0415	0.0400
Women								
Agriculture	Regular	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
	Enforced	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
Construction and Industry	Regular	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
	Enforced	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
Office and Services	Regular	Effect	**-0.2067**	**-0.1732**	-0.0726	-0.0112	0.1061	0.1117
		S.E.	0.0300	0.0358	0.0546	0.0570	0.0557	0.0581
	Enforced	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
Community Services	Regular	Effect	**-0.2183**	**-0.2264**	**-0.1617**	**-0.1321**	-0.0270	-0.0108
		S.E.	0.0237	0.0246	0.0315	0.0327	0.0343	0.0339
	Enforced	Effect	**-0.2252**	**-0.1982**	*-0.1261*	-0.0541	0.0450	*0.1261*
		S.E.	0.0401	0.0407	0.0555	0.0536	0.0572	0.0553
Other	Regular	Effect	**-0.2067**	**-0.1875**	**-0.1058**	-0.0144	*0.0817*	*0.1202*
		S.E.	0.0251	0.0356	0.0410	0.0393	0.0404	0.0499
	Enforced	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–

Bold letters indicate significance on a 1% level, *italic* letters refer to the 5% level. Standard errors are bootstrapped with 50 replications.
Results refer to NN matching without replacement and a caliper of 0.02.
[1] Groups of less than 100 participants are excluded from estimation.

(and rejected for one) and for three female groups (again, rejected for one). However, the differences are not very pronounced and do no not allow a clear confirmation of the hypothesis.

Let us now look at the effects in more detail, starting with the effects for West Germany. Table 3 shows that the positive effect for men in Office and Services is confirmed and even higher for men in regular promotion. The employment rate of these men is 13.6% higher than the one from the

Tab. 4: Sectoral Employment Effects by Type of Promotion - Selected Months (East Germany)[1]

East Germany								
Men								
Sector	Type of Promotion		Jul 00	Dec 00	Jul 01	Dec 01	Jul 02	Dec 02
Agriculture	Regular	Effect	**-0.1384**	**-0.1071**	**-0.1250**	**-0.0804**	**-0.0759**	*-0.0536*
		S.E.	0.0210	0.0221	0.0255	0.0216	0.0269	0.0255
	Enforced	Effect	**-0.1626**	**-0.0927**	**-0.1127**	**-0.0599**	**-0.0728**	-0.0300
		S.E.	0.0113	0.0133	0.0172	0.0167	0.0184	0.0193
Construction and Industry	Regular	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
	Enforced	Effect	**-0.1786**	**-0.1161**	**-0.1280**	**-0.0655**	*-0.0595*	-0.0387
		S.E.	0.0173	0.0217	0.0282	0.0236	0.0303	0.0254
Office and Services	Regular	Effect	**-0.1182**	**-0.1273**	-0.0636	-0.0273	0.0364	0.0818
		S.E.	0.0331	0.0375	0.0425	0.0463	0.0443	0.0473
	Enforced	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
Community Services	Regular	Effect	**-0.1573**	**-0.1331**	**-0.1250**	**-0.1331**	**-0.0927**	*-0.0645*
		S.E.	0.0231	0.0243	0.0270	0.0230	0.0285	0.0289
	Enforced	Effect	**-0.1118**	**-0.1242**	*-0.0932*	-0.0311	-0.0062	-0.0559
		S.E.	0.0315	0.0288	0.0397	0.0439	0.0473	0.0451
Other	Regular	Effect	**-0.1078**	**-0.0929**	**-0.1190**	**-0.0632**	-0.0335	0.0149
		S.E.	0.0218	0.0209	0.0295	0.0247	0.0302	0.0233
	Enforced	Effect	**-0.1439**	**-0.1254**	**-0.0954**	**-0.0670**	**-0.0570**	-0.0157
		S.E.	0.0143	0.0147	0.0213	0.0163	0.0186	0.0161
Women								
Agriculture	Regular	Effect	**-0.0785**	**-0.0579**	*-0.0579*	**-0.0620**	-0.0496	-0.0165
		S.E.	0.0181	0.0199	0.0248	0.0226	0.0291	0.0261
	Enforced	Effect	**-0.0861**	**-0.0888**	**-0.0848**	**-0.0740**	**-0.0458**	*-0.0350*
		S.E.	0.0099	0.0122	0.0135	0.0132	0.0142	0.0139
Construction and Industry	Regular	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
	Enforced	Effect	**-0.1103**	**-0.0966**	*-0.0759*	-0.0483	-0.0483	-0.0552
		S.E.	0.0320	0.0270	0.0334	0.0379	0.0360	0.0334
Office and Services	Regular	Effect	**-0.0852**	**-0.0877**	**-0.0602**	**-0.0576**	-0.0326	-0.0251
		S.E.	0.0159	0.0168	0.0226	0.0224	0.0255	0.0241
	Enforced	Effect	**-0.1423**	**-0.1301**	**-0.0772**	*-0.0569*	-0.0447	-0.0163
		S.E.	0.0240	0.0212	0.0278	0.0256	0.0290	0.0299
Community Services	Regular	Effect	**-0.0808**	**-0.0927**	**-0.0459**	**-0.0331**	-0.0165	0.0294
		S.E.	0.0078	0.0097	0.0137	0.0127	0.0147	0.0151
	Enforced	Effect	**-0.0847**	**-0.0889**	**-0.0569**	-0.0139	0.0056	0.0250
		S.E.	0.0112	0.0114	0.0127	0.0169	0.0207	0.0178
Other	Regular	Effect	**-0.0794**	**-0.0967**	**-0.0846**	**-0.0829**	**-0.0535**	-0.0328
		S.E.	0.0112	0.0112	0.0182	0.0185	0.0191	0.0220
	Enforced	Effect	**-0.0732**	**-0.0610**	**-0.0646**	**-0.0415**	-0.0268	-0.0024
		S.E.	0.0117	0.0101	0.0147	0.0119	0.0154	0.0145

Bold letters indicate significance on a 1% level, *italic* letters refer to the 5% level. Standard errors are bootstrapped with 50 replications.
Results refer to NN matching without replacement and a caliper of 0.02.
[1] Groups of less than 100 participants are excluded from estimation.

matched nonparticipants. It is also quite interesting to note that the differentiation between REGULAR and ENFORCED promotion for women in Community Services leads to positive effects. The effect for the whole group has been positive but insignificant, and is now 12.6% for ENFORCED promotion and insignificant for women in REGULAR promotion. However, what should be kept in mind is that the MSB for this group after matching was quite high and we additionally lost a significant share of

participants due to missing common support. Hence, the interpretation of the results for this group is strongly restricted. Positive effects could not be established for any of the groups in East Germany (table 4). In contrary, we find negative effects for men in AGRICULTURE (-5.4%) and COMMUNITY SERVICES (-6.5%) who receive REGULAR promotion. For women we find only one significant effect, namely -3.5% for participants in ENFORCED promotion in AGRICULTURE. Hence, we can give no clear recommendation on which type of promotion should be preferred. There are only two groups with positive effects anyway. For the first group (men in OFFICE AND SERVICES in West Germany) we can only estimate the effects of REGULAR promotion, since the number of participants in ENFORCED promotion is too small. For the second group (women in COMMUNITY SERVICES), the findings should not be overemphasised since the matching indicators (MSB and number of treated individuals lost due to common support) are not favourable. However, for most of the groups participation in JCS has no effect at all.

6.3 Gender, Regions and Providers

Tables 5 (West Germany) and 6 (East Germany) contain the results in the programme sectors differentiated by the implementing institution.[13] We have presented already that there are three types of providers, namely institutions from the PUBLIC sector, NON-COMMERCIAL organisations and PRIVATE businesses. Since the number of participants in PRIVATE businesses is very small, we had to exclude this group from the analysis. Additionally, especially in West Germany the differentiation between providers leads to group classes below 100 observations, such that we can estimate the effects only for three female and six male groups. In East Germany this is not so problematic and we exclude only three out of 20 groups.

Turning to the results in West Germany shows, that there are no clear differences with respect to locking-in effects in the first months. For example men in AGRICULTURE in the PUBLIC SECTOR

[13] The results over time for the five sectors and the types of provider are available on request by the authors.

Tab. 5: Sectoral Employment Effects by Type of Provider - Selected Months (West Germany)[1]

West Germany								
Men								
Sector	Provider		Jul 00	Dec 00	Jul 01	Dec 01	Jul 02	Dec 02
Agriculture	Public	Effect	**-0.1976**	**-0.1108**	**-0.1138**	*-0.0659*	-0.0449	-0.0120
		S.E.	0.0228	0.0218	0.0239	0.0258	0.0297	0.0228
	Non-Commercial	Effect	**-0.1849**	**-0.1681**	*-0.0840*	*-0.0378*	0.0168	0.0294
		S.E.	0.0316	0.0308	0.0337	0.0373	0.0363	0.0325
Construction and Industry	Public	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
	Non-Commercial	Effect	**-0.1932**	**-0.1818**	**-0.1023**	-0.0379	-0.0455	-0.0076
		S.E.	0.0274	0.0264	0.0365	0.0328	0.0356	0.0363
Office and Services	Public	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
	Non-Commercial	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
Community Services	Public	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
	Non-Commercial	Effect	**-0.2283**	**-0.2165**	**-0.1496**	**-0.1024**	-0.0472	0.0197
		S.E.	0.0302	0.0329	0.0380	0.0373	0.0383	0.0362
Other	Public	Effect	**-0.2189**	**-0.1990**	**-0.1592**	**-0.1343**	*-0.0945*	-0.0348
		S.E.	0.0365	0.0360	0.0377	0.0366	0.0377	0.0359
	Non-Commercial	Effect	**-0.2047**	**-0.1599**	**-0.0981**	**-0.0661**	-0.0235	0.0043
		S.E.	0.0215	0.0263	0.0252	0.0256	0.0297	0.0309
Women								
Agriculture	Public	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
	Non-Commercial	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
Construction and Industry	Public	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
	Non-Commercial	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
Office and Services	Public	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
	Non-Commercial	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
Community Services	Public	Effect	**-0.1984**	**-0.1984**	**-0.1429**	-0.0635	-0.0079	-0.0079
		S.E.	0.0411	0.0395	0.0446	0.0484	0.0593	0.0564
	Non-Commercial	Effect	**-0.2099**	**-0.2431**	**-0.1160**	**-0.0939**	0.0138	0.0442
		S.E.	0.0200	0.0247	0.0297	0.0326	0.0304	0.0318
Other	Public	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
	Non-Commercial	Effect	**-0.1937**	**-0.2304**	**-0.1257**	-0.0785	0.0000	0.0105
		S.E.	0.0249	0.0355	0.0424	0.0430	0.0455	0.0454

Bold letters indicate significance on a 1% level, *italic* letters refer to the 5% level. Standard errors are bootstrapped with 50 replications.
Results refer to NN matching without replacement and a caliper of 0.02.
[1] Groups of less than 100 participants are excluded from estimation.

have an effect of -19.8% in July 2000, whereas those participating in a programme provided by a Non-commercial institution have an effect of -18.5% in the same month. The same relation also holds for participants in the sector Other. For women in Community Services on the other hand the relation is the other way around, with -19.8% in the public sector and -21.0% in the non-commercial sector. One year later in July 2001, that is nearly four months after most of

Tab. 6: Sectoral Employment Effects by Type of Provider - Selected Months (East Germany) [1]

Sector	Provider		Jul 00	Dec 00	Jul 01	Dec 01	Jul 02	Dec 02
West Germany								
Men								
Agriculture	Public	Effect	**-0.1475**	**-0.1079**	**-0.1403**	**-0.0827**	-0.0432	-0.0180
		S.E.	0.0222	0.0201	0.0260	0.0196	0.0229	0.0243
	Non-Commercial	Effect	**-0.1246**	**-0.0902**	**-0.0918**	**-0.0689**	**-0.0754**	**-0.0525**
		S.E.	0.0141	0.0133	0.0176	0.0158	0.0153	0.0141
Construction and Industry	Public	Effect	**-0.1556**	**-0.1667**	**-0.1000**	-0.0667	-0.0500	-0.0611
		S.E.	0.0290	0.0261	0.0377	0.0393	0.0326	0.0319
	Non-Commercial	Effect	**-0.1827**	**-0.1154**	**-0.1538**	**-0.0913**	*-0.0721*	-0.0433
		S.E.	0.0289	0.0287	0.0368	0.0307	0.0358	0.0286
Office and Services	Public	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
	Non-Commercial	Effect	**-0.1290**	**-0.1048**	**-0.1290**	-0.0645	0.0161	0.0484
		S.E.	0.0354	0.0325	0.0393	0.0373	0.0519	0.0453
Community Services	Public	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
	Non-Commercial	Effect	**-0.1524**	**-0.1494**	**-0.1128**	**-0.0976**	*-0.0488*	-0.0122
		S.E.	0.0221	0.0178	0.0246	0.0274	0.0209	0.0268
Other	Public	Effect	**-0.1719**	**-0.0990**	**-0.1146**	**-0.0990**	-0.0573	-0.0260
		S.E.	0.0286	0.0273	0.0338	0.0312	0.0338	0.0299
	Non-Commercial	Effect	**-0.1434**	**-0.1298**	**-0.0943**	**-0.0464**	**-0.0464**	-0.0055
		S.E.	0.0144	0.0106	0.0156	0.0178	0.0167	0.0139
Women								
Agriculture	Public	Effect	**-0.0818**	**-0.0881**	**-0.0597**	**-0.0723**	-0.0377	-0.0314
		S.E.	0.0155	0.0161	0.0217	0.0170	0.0213	0.0204
	Non-Commercial	Effect	**-0.0866**	**-0.0677**	**-0.0772**	**-0.0409**	-0.0252	-0.0142
		S.E.	0.0116	0.0091	0.0171	0.0153	0.0187	0.0157
Construction and Industry	Public	Effect	–	–	–	–	–	–
		S.E.	–	–	–	–	–	–
	Non-Commercial	Effect	**-0.1157**	*-0.0579*	-0.0579	0.0165	-0.0165	0.0165
		S.E.	0.0292	0.0274	0.0357	0.0375	0.0375	0.0373
Office and Services	Public	Effect	**-0.0939**	**-0.0903**	*-0.0614*	*-0.0614*	*-0.0578*	-0.0181
		S.E.	0.0135	0.0169	0.0283	0.0252	0.0270	0.0271
	Non-Commercial	Effect	**-0.1145**	**-0.1205**	**-0.0663**	*-0.0512*	-0.0120	-0.0181
		S.E.	0.0171	0.0164	0.0245	0.0219	0.0265	0.0227
Community Services	Public	Effect	**-0.0880**	**-0.1129**	**-0.0745**	*-0.0474*	-0.0451	-0.0316
		S.E.	0.0121	0.0134	0.0219	0.0232	0.0272	0.0250
	Non-Commercial	Effect	**-0.0984**	**-0.1037**	**-0.0689**	**-0.0386**	-0.0182	0.0144
		S.E.	0.0081	0.0092	0.0127	0.0132	0.0119	0.0137
Other	Public	Effect	**-0.1000**	**-0.0938**	**-0.0688**	*-0.0531*	-0.0313	0.0000
		S.E.	0.0163	0.0168	0.0212	0.0231	0.0234	0.0204
	Non-Commercial	Effect	**-0.1032**	**-0.0942**	**-0.0862**	**-0.0581**	**-0.0481**	*-0.0381*
		S.E.	0.0091	0.0096	0.0132	0.0133	0.0153	0.0153

Bold letters indicate significance on a 1% level, *italic* letters refer to the 5% level. Standard errors are bootstrapped with 50 replications.
Results refer to NN matching without replacement and a caliper of 0.02.
[1] Groups of less than 100 participants are excluded from estimation.

the participants have left the programmes, the effects are still significantly negative for all of the groups ranging for men from -9.8% (Other provided by non-commercial institution) to -15.9% (Other provided by public institution) and for women from -11.6% (Community Services, non-commercial provider) to -14.3% (Community Services, public provider). After that point in time, the effects start to move against zero, which leads to no significant effects at all in December

2002. That means, that participation in JCS neither harms nor helps individuals in terms of a higher employment rate in December 2002.

The situation in East Germany is different but unfortunately not better. The locking-in effects are much smaller and range from -12.5% (Agriculture, non-commercial provider) to -18.3% (Construction and Industry, non-commercial provider) for men and -8.2% (Agriculture, public provider) to -11.6% (Construction and Industry, non-commercial provider) for women. In July 2001 the effects are, similar to West Germany, still significantly negative for most of the groups, but on a slightly lower level. There is also a further improvement in the following months leading to insignificant effects in December 2002. However, we find significant negative effects for men in the sector Agriculture provided by Non-commercial institutions (-5.3%) and for women in Other provided by Non-commercial institutions (-3.8%). That means, that participation in JCS either harms or does not influence the participants in East Germany in terms of a higher employment rate in December 2002.

7 Conclusions

JCS have been a major ALMP programme in Germany in the 1990s and the early 2000s. They are implemented in different sectors of the economy (e.g. Agriculture, Construction and Industry or Office and Services), by different service providers (for example Public or Non-commercial institutions) and there are also two types of promotion. Furthermore, the unemployed workers promoted by these programmes do also differ with respect to their individual employability. For these reasons, effect heterogeneity is an important topic for programme evaluation. Identifying effect heterogeneity on the one hand can help to improve the design and implementation of future programmes, but requires rich data on the other hand. As we can use data from administrative sources of the FEA, we are able to include information on more than 11,000 participants and nearly 230,000 nonparticipants in our analysis.

Whereas in Caliendo, Hujer, and Thomsen (2005a) we have analysed the employment effects of JCS on the participants with respect to group-specific and regional heterogeneity, we focus here explicitly on effect heterogeneity caused by differences in the implementation of the programmes. We are able to evaluate the employment effects of participants for nearly three years after programmes have started. The descriptive analysis of participants and nonparticipants showed several notable differences between sectors, but also between gender and regions, that were accounted for in the estimation of the effects. The analysis has been done separately for men and women in West and East Germany and differentiated by sectors, providers and types of promotion.

The overall findings are rather disappointing. Although we find positive employment effects at the end of our observation period in December 2002 for some groups, i.e. men in West Germany in Office and Services and women in East Germany in Community Services, for all other groups the programmes do not have any effect or even harm the employment chances of the participants. In East Germany for example, men participating in the sectors Construction and Industry and Other as well as women in Office and Services and Other experience a loss of employability. The results for the other aspects in consideration (type of provider, type of promotion) are similar. Furthermore, the results show that participation in JCS is associated with strong locking-in effects during the time of the programmes. Although this finding is not surprising as JCS are some kind of work, it maybe a major source of the unsatisfying programme effects for almost all groups.

Our findings are consistent with previous empirical findings and confirm that JCS are in general not able to improve the re-integration probability into regular employment for participating unemployed persons. However, we have also shown that the programmes work in some settings. Hence, a clear policy recommendation is to address programmes more tightly to problem groups of the labour market and thereby reduce the number of participants. Given that, programmes should also be designed more specifically in accordance with the needs of the participants.

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Appendix

Tab. A.1: Selected Descriptives for Men in West Germany

Variables	Non-part.	Agricul.	Constr. and Industry	Office and Services	Comm. Services	Other
Number of observations	44095	584	371	131	320	734
Programme Duration (in days)		261.5	279.1	336.7	285.2	277.1
Socio-Demographic Variables						
Age	43.22	39.02	35.01	42.65	34.98	36.88
Married	0.52	0.37	0.37	0.38	0.30	0.34
Number of children	0.41	0.51	0.44	0.41	0.38	0.39
Health restrictions						
No health restrictions	0.68	0.74	0.81	0.58	0.76	0.74
Acc. DoR, 80% and over	0.01	0.02	0.01	0.07	0.02	0.02
Acc. DoR, 50% to under 80%	0.06	0.05	0.03	0.15	0.07	0.06
Acc. DoR, 30% to under 50%	0.00	0.01	0.00	0.02	0.01	0.00
Acc. DoR, 30% to under 50%, no equalis.	0.05	0.03	0.03	0.06	0.02	0.02
Other health restrictions	0.20	0.15	0.12	0.12	0.12	0.15
Rehabilitation attendant	0.06	0.05	0.06	0.11	0.06	0.04
Placement restrictions	0.22	0.16	0.14	0.22	0.16	0.18
Qualification Variables						
Professional Training						
Without compl. prof. training, no CSE	0.15	0.34	0.31	0.07	0.18	0.24
Without compl. prof. training, with CSE	0.34	0.36	0.44	0.15	0.34	0.38
Industrial training	0.44	0.27	0.24	0.47	0.30	0.31
Full-time vocational school	0.01	0.00	0.01	0.02	0.02	0.01
Technical school	0.02	0.01	0.00	0.10	0.04	0.01
Polytechnic	0.01	0.00	0.00	0.07	0.05	0.01
College, university	0.02	0.01	0.00	0.14	0.08	0.03
Occupational group						
Plant cultivation, breeding, fishery	0.04	0.17	0.08	0.04	0.03	0.06
Mining, mineral extraction	0.01	0.00	0.01	0.00	0.00	0.00
Manufacturing	0.48	0.52	0.67	0.17	0.41	0.56
Technical professions	0.05	0.01	0.02	0.17	0.03	0.03
Service professions	0.41	0.28	0.20	0.63	0.50	0.33
Other professions	0.02	0.02	0.03	0.00	0.03	0.03
Professional Rank						
Unskilled worker	0.24	0.45	0.39	0.11	0.18	0.28
Skilled worker	0.15	0.06	0.07	0.05	0.07	0.09
White-collar worker, simple occupations	0.07	0.02	0.03	0.14	0.09	0.05
White-collar worker, advanced occupations	0.05	0.01	0.01	0.19	0.06	0.03
Other	0.49	0.46	0.51	0.50	0.59	0.55
Qualification (with work experience)	0.93	0.92	0.88	0.84	0.84	0.85
Career Variables						
Duration last employment	72.08	16.71	18.57	27.14	18.97	20.51
Duration of unemployment						
< 13	0.28	0.22	0.28	0.18	0.30	0.28
$13 - 52$	0.32	0.33	0.37	0.31	0.38	0.34
> 52	0.41	0.45	0.35	0.51	0.32	0.38
Number of placement propositions	3.60	8.17	6.87	9.23	7.08	7.74
Last contact to job center	2.54	2.27	2.38	2.97	2.49	2.61
Programme before unemployment						
No further education or programme	0.90	0.69	0.66	0.66	0.78	0.74
Further education compl., cont. education	0.07	0.10	0.11	0.14	0.09	0.09
Further education compl., voc. adjustment	0.00	0.02	0.01	0.01	0.00	0.01
Job-preparative measure	0.00	0.00	0.00	0.00	0.00	0.00
Job creation scheme	0.02	0.19	0.21	0.16	0.13	0.15
Rehabilitation measure	0.01	0.01	0.01	0.03	0.00	0.01
Regional Context Variables						
Cluster II	0.40	0.37	0.61	0.31	0.23	0.37
Cluster III	0.37	0.47	0.28	0.39	0.39	0.36
Cluster IV	0.08	0.06	0.02	0.07	0.16	0.11
Cluster V	0.15	0.10	0.08	0.23	0.23	0.16

[1] DoR = degree of restriction
[2] People with accepted degree of restriction, but no equalisation to other persons with the same DoR.
[3] CSE = Certificate for secondary education

Tab. A.2: Selected Descriptives for Women in West Germany

Variables	Non-part.	Agricul.	Constr. and Industry	Office and Services	Comm. Services	Other
Number of observations			34227	202	503	270
Programme Duration (in days)				307.2	305.1	310.7
Socio-Demographic Variables						
Age			43.33	39.93	38.00	36.92
Married			0.63	0.50	0.40	0.36
Number of children			0.58	0.62	0.65	0.47
Health restrictions						
No health restrictions			0.73	0.76	0.79	0.79
Acc. DoR, 80% and over			0.01	0.03	0.03	0.03
Acc. DoR, 50% to under 80%			0.04	0.09	0.03	0.06
Acc. DoR, 30% to under 50%			0.00	0.01	0.01	0.01
Acc. DoR, 30% to under 50%, no equalis.			0.04	0.01	0.02	0.01
Other health restrictions			0.18	0.08	0.12	0.11
Rehabilitation attendant			0.03	0.05	0.04	0.05
Placement restrictions			0.18	0.16	0.13	0.13
Qualification Variables						
Professional Training						
Without compl. prof. training, no CSE			0.11	0.01	0.08	0.11
Without compl. prof. training, with CSE			0.39	0.29	0.37	0.41
Industrial training			0.42	0.46	0.29	0.30
Full-time vocational school			0.02	0.03	0.03	0.02
Technical school			0.03	0.03	0.08	0.03
Polytechnic			0.01	0.04	0.07	0.04
College, university			0.02	0.13	0.07	0.08
Occupational group						
Plant cultivation, breeding, fishery			0.02	0.00	0.01	0.03
Mining, mineral extraction			0.00	0.00	0.00	0.00
Manufacturing			0.24	0.03	0.10	0.26
Technical professions			0.02	0.05	0.00	0.03
Service professions			0.71	0.89	0.88	0.66
Other professions			0.01	0.03	0.01	0.02
Professional Rank						
Unskilled worker			0.17	0.05	0.15	0.15
Skilled worker			0.06	0.03	0.03	0.04
White-collar worker, simple occupations			0.18	0.27	0.20	0.13
White-collar worker, advanced occupations			0.04	0.08	0.12	0.07
Other			0.54	0.56	0.50	0.61
Qualification (with work experience)			0.93	0.84	0.86	0.85
Career Variables						
Duration last employment			64.12	32.98	24.82	21.09
Duration of unemployment						
< 13			0.22	0.23	0.20	0.25
$13 - 52$			0.36	0.39	0.40	0.36
> 52			0.42	0.38	0.39	0.40
Number of placement propositions			2.99	8.08	6.42	6.80
Last contact to job center			2.40	2.57	2.69	2.29
Programme before unemployment						
No further education or programme			0.91	0.57	0.67	0.74
Further education compl., cont. education			0.07	0.20	0.11	0.10
Further education compl., voc. adjustment			0.00	0.01	0.00	0.01
Job-preparative measure			0.00	0.00	0.01	0.00
Job creation scheme			0.01	0.18	0.20	0.15
Rehabilitation measure			0.00	0.03	0.01	0.01
Regional Context Variables						
Cluster II			0.34	0.23	0.35	0.34
Cluster III			0.41	0.47	0.38	0.38
Cluster IV			0.09	0.06	0.08	0.08
Cluster V			0.16	0.23	0.18	0.20

[1] DoR = degree of restriction
[2] People with accepted degree of restriction, but no equalisation to other persons with the same DoR.
[3] CSE = Certificate for secondary education

Tab. A.3: Selected Descriptives for Men in East Germany

Variables	Non-part.	Agricul.	Constr. and Industry	Office and Services	Comm. Services	Other
Number of observations	64788	925	416	202	410	971
Programme Duration (in days)		325.0	273.5	332.1	324.3	327.1
Socio-Demographic Variables						
Age	41.73	46.02	43.13	48.87	42.83	43.47
Married	0.48	0.54	0.51	0.73	0.58	0.50
Number of children	0.36	0.42	0.45	0.40	0.40	0.37
Health restrictions						
No health restrictions	0.75	0.79	0.81	0.75	0.69	0.77
Acc. DoR, 80% and over	0.00	0.01	0.00	0.01	0.01	0.01
Acc. DoR, 50% to under 80%	0.02	0.02	0.02	0.08	0.06	0.04
Acc. DoR, 30% to under 50%	0.01	0.01	0.01	0.02	0.03	0.01
Acc. DoR, 30% to under 50%, no equalis.	0.02	0.02	0.01	0.03	0.02	0.01
Other health restrictions	0.20	0.17	0.15	0.11	0.20	0.17
Rehabilitation attendant	0.07	0.05	0.05	0.07	0.15	0.08
Placement restrictions	0.16	0.11	0.09	0.14	0.20	0.14
Qualification Variables						
Professional Training						
Without compl. prof. training, no CSE	0.06	0.13	0.09	0.02	0.04	0.07
Without compl. prof. training, with CSE	0.17	0.19	0.19	0.11	0.18	0.24
Industrial training	0.69	0.64	0.70	0.41	0.60	0.57
Full-time vocational school	0.01	0.00	0.00	0.01	0.01	0.01
Technical school	0.04	0.02	0.01	0.26	0.07	0.06
Polytechnic	0.01	0.00	0.00	0.05	0.02	0.01
College, university	0.03	0.01	0.00	0.14	0.08	0.04
Occupational group						
Plant cultivation, breeding, fishery	0.05	0.13	0.06	0.03	0.02	0.04
Mining, mineral extraction	0.00	0.00	0.00	0.00	0.00	0.00
Manufacturing	0.53	0.56	0.72	0.13	0.42	0.53
Technical professions	0.06	0.03	0.02	0.34	0.09	0.06
Service professions	0.33	0.27	0.20	0.50	0.46	0.35
Other professions	0.03	0.01	0.00	0.00	0.01	0.01
Professional Rank						
Unskilled worker	0.22	0.38	0.34	0.15	0.22	0.28
Skilled worker	0.29	0.20	0.23	0.15	0.21	0.19
White-collar worker, simple occupations	0.04	0.02	0.02	0.18	0.07	0.06
White-collar worker, advanced occupations	0.02	0.01	0.01	0.05	0.04	0.01
Other	0.43	0.39	0.40	0.47	0.45	0.46
Qualification (with work experience)	0.89	0.93	0.92	0.91	0.84	0.89
Career Variables						
Duration last employment	55.51	25.38	19.53	28.04	18.35	26.52
Duration of unemployment						
< 13	0.34	0.18	0.20	0.19	0.23	0.20
$13 - 52$	0.35	0.38	0.42	0.47	0.48	0.44
> 52	0.31	0.44	0.38	0.34	0.29	0.36
Number of placement propositions	3.01	5.41	6.86	7.08	6.35	6.01
Last contact to job center	2.79	2.59	2.41	2.71	2.65	2.47
Programme before unemployment						
No further education or programme	0.83	0.49	0.51	0.46	0.49	0.60
Further education compl., cont. education	0.09	0.13	0.15	0.28	0.13	0.12
Further education compl., voc. adjustment	0.03	0.06	0.06	0.04	0.06	0.04
Job-preparative measure	0.00	0.00	0.00	0.00	0.01	0.00
Job creation scheme	0.05	0.32	0.26	0.21	0.29	0.22
Rehabilitation measure	0.01	0.00	0.00	0.02	0.01	0.01
Regional Context Variables						
Cluster Ia	0.22	0.35	0.15	0.24	0.11	0.22
Cluster Ib	0.65	0.52	0.62	0.68	0.74	0.66
Cluster Ic	0.11	0.12	0.20	0.08	0.12	0.07
Cluster II	0.02	0.00	0.03	0.00	0.02	0.05

[1] DoR = degree of restriction
[2] People with accepted degree of restriction, but no equalisation to other persons with the same DoR.
[3] CSE = Certificate for secondary education

Tab. A.4: Selected Descriptives for Women in East Germany

Variables	Non-part.	Agricul.	Constr. and Industry	Office and Services	Comm. Services	Other
Number of observations	76512	986	193	645	1810	1401
Programme Duration (in days)		322.2	289.5	337.9	336.6	340.7
Socio-Demographic Variables						
Age	44.01	43.37	43.09	45.23	44.27	43.16
Married	0.64	0.67	0.65	0.75	0.70	0.62
Number of children	0.67	0.89	0.87	0.74	0.75	0.80
Health restrictions						
No health restrictions	0.80	0.90	0.87	0.84	0.83	0.85
Acc. DoR, 80% and over	0.00	0.00	0.01	0.00	0.01	0.01
Acc. DoR, 50% to under 80%	0.02	0.01	0.00	0.04	0.02	0.02
Acc. DoR, 30% to under 50%	0.00	0.00	0.01	0.01	0.01	0.01
Acc. DoR, 30% to under 50%, no equalis.	0.01	0.00	0.00	0.01	0.01	0.00
Other health restrictions	0.17	0.09	0.12	0.10	0.12	0.12
Rehabilitation attendant	0.05	0.01	0.03	0.03	0.04	0.03
Placement restrictions	0.12	0.04	0.06	0.07	0.10	0.08
Qualification Variables						
Professional Training						
Without compl. prof. training, no CSE	0.05	0.09	0.10	0.00	0.01	0.03
Without compl. prof. training, with CSE	0.21	0.23	0.17	0.12	0.18	0.20
Industrial training	0.66	0.64	0.69	0.62	0.63	0.61
Full-time vocational school	0.01	0.01	0.01	0.02	0.03	0.02
Technical school	0.05	0.02	0.02	0.14	0.12	0.10
Polytechnic	0.00	0.01	0.00	0.03	0.01	0.01
College, university	0.02	0.01	0.00	0.06	0.02	0.03
Occupational group						
Plant cultivation, breeding, fishery	0.05	0.20	0.16	0.02	0.03	0.05
Mining, mineral extraction	0.00	0.00	0.00	0.00	0.00	0.00
Manufacturing	0.20	0.31	0.30	0.03	0.14	0.22
Technical professions	0.03	0.03	0.03	0.10	0.04	0.07
Service professions	0.70	0.46	0.52	0.84	0.79	0.66
Other professions	0.02	0.00	0.00	0.00	0.00	0.00
Professional Rank						
Unskilled worker	0.21	0.40	0.41	0.12	0.21	0.23
Skilled worker	0.16	0.11	0.15	0.16	0.16	0.14
White-collar worker, simple occupations	0.09	0.02	0.04	0.15	0.13	0.12
White-collar worker, advanced occupations	0.02	0.01	0.00	0.04	0.02	0.02
Other	0.53	0.46	0.39	0.53	0.48	0.49
Qualification (with work experience)	0.90	0.91	0.93	0.92	0.90	0.89
Career Variables						
Duration last employment	63.44	25.10	24.89	37.54	33.54	30.07
Duration of unemployment						
< 13	0.16	0.10	0.17	0.13	0.10	0.13
$13 - 52$	0.35	0.33	0.37	0.42	0.42	0.39
> 52	0.49	0.58	0.46	0.45	0.48	0.48
Number of placement propositions	2.77	4.67	5.40	6.10	5.57	5.44
Last contact to job center	2.78	2.57	2.45	2.54	2.58	2.65
Programme before unemployment						
No further education or programme	0.72	0.42	0.49	0.34	0.42	0.47
Further education compl., cont. education	0.17	0.19	0.16	0.34	0.25	0.22
Further education compl., voc. adjustment	0.03	0.05	0.07	0.05	0.05	0.04
Job-preparative measure	0.00	0.00	0.00	0.00	0.00	0.00
Job creation scheme	0.08	0.33	0.28	0.27	0.28	0.27
Rehabilitation measure	0.00	0.00	0.00	0.00	0.00	0.00
Regional Context Variables						
Cluster Ia	0.23	0.35	0.30	0.17	0.19	0.27
Cluster Ib	0.65	0.53	0.60	0.69	0.70	0.64
Cluster Ic	0.10	0.12	0.09	0.13	0.10	0.07
Cluster II	0.02	0.00	0.02	0.01	0.02	0.02

[1] DoR = degree of restriction
[2] People with accepted degree of restriction, but no equalisation to other persons with the same DoR.
[3] CSE = Certificate for secondary education

Tab. A.5: Estimation Results of the Logit Models for the Propensity Score for Men in West Germany

	Agricul.	Constr. and Industry	Office and Services	Comm. Services	Other
Constant	**-4.5090**	**-2.0459**	**-14.7072**	**-1.9766**	**-1.4588**
Socio-Demographic Variables					
Age	0.0296	**-0.1343**	**0.3791**	**-0.1129**	**-0.0903**
Age^2	-0.0004	**0.0012**	**-0.0046**	0.0008	**0.0008**
Married	-0.1962	0.2334	-0.2226	-0.2582	*-0.2198*
Number of children	0.0821	0.0138	0.0544	0.1037	0.0470
German	**0.4813**	**0.7739**	0.3909	*0.3824*	*0.2198*
Health restrictions					
No health restrictions	Ref.	Ref.	Ref.	Ref.	Ref.
Acc. DoR[1], 80% and over	**1.0175**	-0.1815	**2.6592**	*0.9154*	**0.8374**
Acc. DoR, 50% to under 80%	**0.6903**	-0.2525	**2.1295**	**1.0849**	**0.7921**
Acc. DoR, 30% to under 50%	*1.2822*	–	**2.2650**	*1.6448*	1.0191
Acc. DoR, 30% to under 50%, no equalis.[2]	0.4658	-0.1619	**1.5272**	0.2676	-0.0430
Other health restrictions	0.0007	*-0.5748*	0.3054	-0.0625	0.0104
Qualification Variables					
Professional training					
Without compl. prof. training, no CSE	Ref.	Ref.	Ref.	Ref.	Ref.
Without compl. prof. training, with CSE	**-0.4973**	-0.2519	0.0767	-0.1785	*-0.2244*
Industrial training	**-0.8328**	**-0.9076**	*0.7825*	*-0.4150*	**-0.6079**
Full-time vocational school	**-2.2360**	-0.7638	0.5245	0.1831	-0.8342
Technical school	-0.6101	-1.9566	**1.8069**	*0.8077*	-0.3926
Polytechnic	-1.1617	-1.2058	**1.5514**	**1.5481**	0.2834
College, University	**-1.2767**	-1.6570	**1.5608**	**1.1832**	0.3560
Occupational group					
Plant cultivation, breeding, fishery	**0.7547**	-0.2927	0.5320	-0.5022	-0.2250
Mining, mineral extraction	-0.1697	-0.2687	–	–	-1.0362
Manufacturing	Ref.	Ref.	Ref.	Ref.	Ref.
Technical professions	**-1.1560**	-0.3301	**1.1658**	**-0.9419**	**-0.6920**
Service professions	**-0.3911**	**-0.9058**	**0.8755**	0.2073	**-0.3893**
Other professions	0.1087	-0.0414	–	0.0509	0.1483
Professional rank					
Unskilled worker	Ref.	Ref.	Ref.	Ref.	Ref.
Skilled worker	**-0.9516**	**-0.6308**	-0.1782	-0.2041	-0.2274
White-collar worker, simple occupations	**-0.9201**	-0.3070	**0.9784**	**0.7277**	0.1837
White-collar worker, advanced occupations	-0.4016	-0.9263	**1.2236**	*0.6425*	0.2038
Other	**-0.3683**	-0.1285	0.4315	**0.5479**	0.1596
Qualification (with work experience)	-0.1010	-0.0272	**-0.6922**	*-0.3797*	**-0.5170**
Career Variables					
Duration of last employment (months)	**-0.0060**	**-0.0037**	**-0.0045**	**-0.0042**	**-0.0042**
Duration of unemployment (weeks)					
Up to 13 weeks	Ref.	Ref.	Ref.	Ref.	Ref.
Between 13 and 52 weeks	**0.3618**	0.1339	0.1228	0.1566	0.0478
More than 52 weeks	**0.4661**	0.1087	0.2744	0.1279	0.1306
Number of placement propositions	**0.0488**	**0.0390**	**0.0548**	**0.0422**	**0.0509**
Last contact to job center (weeks)	**-0.0868**	-0.0427	**0.1005**	0.0370	*0.0481*
Rehabilitation attendant	-0.1213	0.3637	0.0981	0.0664	**-0.6723**
Placement restrictions	**-0.5594**	0.1139	**-0.9824**	-0.2758	-0.0975
Programme before unemployment					
No further education or programme	Ref.	Ref.	Ref.	Ref.	Ref.
Further education compl., cont. education	0.2545	**0.4914**	0.3483	0.0440	0.1234
Further education compl., voc. adjustment	*0.7916*	**1.3185**	0.0651	–	0.7083
Job-preparative measure	–	–	–	–	0.4281
Job creation scheme	**1.8566**	**2.3925**	**2.2831**	**2.1205**	**2.1139**
Rehabilitation measure	-0.3244	-0.3238	0.2913	-1.3737	0.2296
Regional Context Variables					
Cluster II	0.0350	**0.8558**	**-1.0783**	**-1.2007**	**-0.3589**
Cluster III	*0.3023*	0.0440	**-0.6491**	**-0.5698**	*-0.2780*
Cluster IV	-0.0778	-0.5322	*-0.9304*	0.0819	0.1881
Cluster V	Ref.	Ref.	Ref.	Ref.	Ref.
Number of Observations	44657	44283	43097	43907	44829
Log-Likelihood	-2641.6	-1788.1	-690.5	-1630.7	-3325.6
R-2	0.151	0.166	0.224	0.139	0.112
F-Test	942.6	711.1	399.1	526.1	841.3

Bold letters indicate significance at the 1% level. *Italic* letters refer to the 5% level.
[1] DoR = degree of restriction.
[2] People with accepted degree of restriction, but no equalisation to other persons with the same DoR.
[3] CSE = Certificate for secondary education
[4] Cluster according to the classification by Blien *et al.* (2004).

Tab. A.6: Estimation Results of the Logit Models for the Propensity Score for Women in West Germany

	Agricul.	Constr. and Industry	Office and Services	Comm. Services	Other
Constant			**-10.8847**	**-4.0484**	**-2.8853**
Socio-Demographic Variables					
Age			*0.1432*	-0.0184	-0.0337
Age^2			**-0.0020**	-0.0001	0.0000
Married			-0.0555	**-0.4877**	**-0.5266**
Number of children			-0.0584	0.0991	-0.1484
German			0.2172	0.2534	0.0660
Health restrictions					
No health restrictions			Ref.	Ref.	Ref.
Acc. DoR[1], 80% and over			**1.6533**	**1.2490**	**1.1843**
Acc. DoR, 50% to under 80%			**1.2609**	0.1901	*0.8155*
Acc. DoR, 30% to under 50%			**2.6829**	*1.6893*	*1.9266*
Acc. DoR, 30% to under 50%, no equalis.[2]			-0.1754	0.0613	-0.1396
Other health restrictions			-0.5043	0.0392	-0.1831
Qualification Variables					
Professional training					
Without compl. prof. training, no CSE			Ref.	Ref.	Ref.
Without compl. prof. training, with CSE			*1.4281*	0.2030	0.1662
Industrial training			*1.4096*	-0.1961	-0.1883
Full-time vocational school			1.2480	0.0993	-0.3989
Technical school			1.2967	**1.0363**	0.2617
Polytechnic			**1.9382**	**1.7607**	**1.0906**
College, University			**2.6014**	**0.7199**	**0.9856**
Occupational group					
Plant cultivation, breeding, fishery			–	-0.3153	0.1718
Mining, mineral extraction			–	–	–
Manufacturing			Ref.	Ref.	Ref.
Technical professions			**2.1652**	*-1.5239*	-0.2572
Service professions			**1.7365**	**0.7999**	*-0.3822*
Other professions			**2.7255**	0.3314	-0.2270
Professional rank					
Unskilled worker			Ref.	Ref.	Ref.
Skilled worker			0.3798	-0.3085	-0.1599
White-collar worker, simple occupations			**0.9857**	0.0576	-0.0256
White-collar worker, advanced occupations			0.6057	**0.6116**	0.5002
Other			0.6401	-0.0642	*0.3818*
Qualification (with work experience)			**-0.5613**	*-0.2914*	-0.2246
Career Variables					
Duration of last employment (months)			-0.0011	**-0.0036**	**-0.0052**
Duration of unemployment (weeks)					
Up to 13 weeks			Ref.	Ref.	Ref.
Between 13 and 52 weeks			-0.0406	0.1764	-0.0637
More than 52 weeks			-0.1897	0.1289	0.0470
Number of placement propositions			**0.0639**	**0.0405**	**0.0519**
Last contact to job center (weeks)			0.0715	**0.0868**	-0.0107
Rehabilitation attendant			-0.2866	0.0587	0.4787
Placement restrictions			-0.2261	-0.2235	-0.4517
Programme before unemployment					
No further education or programme			Ref.	Ref.	Ref.
Further education compl., cont. education			**1.0745**	**0.4635**	0.1449
Further education compl., voc. adjustment			0.8883	0.2137	0.7757
Job-preparative measure			–	**3.0067**	1.9089
Job creation scheme			**3.2762**	**3.0801**	**2.6577**
Rehabilitation measure			**2.4833**	0.4374	0.1713
Regional Context Variables					
Cluster II			**-1.1530**	**-0.4614**	**-0.4831**
Cluster III			*-0.4413*	**-0.4805**	**-0.4413**
Cluster IV			**-0.9771**	-0.3191	-0.3983
Cluster V			Ref.	Ref.	Ref.
Number of Observations			33808	34722	34489
Log-Likelihood			-978.6	-2155.6	-1366.9
Adj. R^2			0.208	0.180	0.134
F-Test			514.1	947.4	423.0

Bold letters indicate significance at the 1% level. *Italic* letters refer to the 5% level.
[1] DoR = degree of restriction.
[2] People with accepted degree of restriction, but no equalisation to other persons with the same DoR.
[3] CSE = Certificate for secondary education
[4] Cluster according to the classification by Blien *et al.* (2004).

Tab. A.7: Estimation Results of the Logit Models for the Propensity Score for Men in East Germany

	Agricul.	Constr. and Industry	Office and Services	Comm. Services	Other
Constant	**-8.2748**	**-9.5586**	**-13.5752**	**-7.7192**	**-5.8072**
Socio-Demographic Variables					
Age	**0.1404**	**0.1422**	**0.2537**	0.0405	*0.0536*
Age^2	**-0.0012**	**-0.0015**	**-0.0027**	-0.0006	-0.0005
Married	*0.1750*	*0.2778*	**0.7052**	**0.6680**	0.1540
Number of children	-0.0003	-0.0185	-0.0923	-0.1112	-0.0355
German	*0.9722*	0.9294		0.4182	0.2826
Health restrictions					
No health restrictions	Ref.	Ref.	Ref.	Ref.	Ref.
Acc. DoR[1], 80% and over	0.7313	–	1.0624	0.9844	0.3286
Acc. DoR, 50% to under 80%	0.1230	0.3058	**1.2961**	**0.7323**	*0.4997*
Acc. DoR, 30% to under 50%	-0.0321	*0.9936*	0.8507	**0.9713**	0.5456
Acc. DoR, 30% to under 50%, no equalis.[2]	0.1819	-0.1677	0.6446	0.1971	-0.6727
Other health restrictions	-0.1835	-0.0607	-0.3975	-0.1103	-0.2133
Qualification Variables					
Professional training					
Without compl. prof. training, no CSE	Ref.	Ref.	Ref.	Ref.	Ref.
Without compl. prof. training, with CSE	-0.1993	0.0082	0.7288	0.5236	*0.3536*
Industrial training	**-0.4028**	-0.0537	0.6616	0.4050	-0.1207
Full-time vocational school	*-1.1763*	–	0.7572	0.9366	-0.0298
Technical school	**-0.7256**	-0.9740	**1.9463**	**1.0078**	*0.4512*
Polytechnic	*-1.2676*	-0.5647	*1.2524*	**1.2241**	0.1479
College, University	**-1.0406**	*-2.3433*	**1.5007**	**1.2085**	0.3227
Occupational group					
Plant cultivation, breeding, fishery	**0.4311**	*-0.4405*	0.7232	*-0.6927*	*-0.4147*
Mining, mineral extraction	-0.2213	–	–	–	-0.9264
Manufacturing	Ref.	Ref.	Ref.	Ref.	Ref.
Technical professions	*-0.5769*	*-0.7692*	**2.0272**	-0.0203	-0.3332
Service professions	**-0.3614**	**-0.8173**	**1.5137**	**0.3114**	-0.1208
Other professions	*-0.8095*	-2.5447	–	*-1.1155*	**-1.1386**
Professional rank					
Unskilled worker	Ref.	Ref.	Ref.	Ref.	Ref.
Skilled worker	**-0.2621**	-0.1943	0.0823	0.1961	*-0.2162*
White-collar worker, simple occupations	*-0.5796*	-0.0050	**0.8196**	**0.6719**	*0.3583*
White-collar worker, advanced occupations	-0.4724	0.0520	0.1988	**0.8298**	*-0.6402*
Other	-0.0491	-0.0736	0.1469	*0.3534*	0.0624
Qualification (with work experience)	0.0340	0.0726	*-0.5968*	**-0.5560**	*-0.2526*
Career Variables					
Duration of last employment (months)	**-0.0033**	**-0.0046**	**-0.0047**	**-0.0058**	**-0.0032**
Duration of unemployment (weeks)					
Up to 13 weeks	Ref.	Ref.	Ref.	Ref.	Ref.
Between 13 and 52 weeks	**0.4516**	**0.5849**	0.2067	0.2123	**0.4993**
More than 52 weeks	**0.6017**	**0.6374**	-0.1582	-0.1864	**0.4252**
Number of placement propositions	**0.0478**	**0.0563**	**0.0865**	**0.0599**	**0.0619**
Last contact to job center (weeks)	**-0.1348**	**-0.1612**	*-0.0797*	*-0.0580*	**-0.1404**
Rehabilitation attendant	-0.0539	0.1741	0.1138	**0.8264**	0.2646
Placement restrictions	*-0.3779*	**-0.6037**	-0.3717	-0.1578	-0.2246
Programme before unemployment					
No further education or programme	Ref.	Ref.	Ref.	Ref.	Ref.
Further education compl., cont. education	**0.5840**	**0.5980**	**1.1618**	**0.5393**	0.2033
Further education compl., voc. adjustment	**0.7988**	**0.7730**	0.2532	**1.0237**	*0.3476*
Job-preparative measure	–	**2.0179**	–	**2.0594**	0.0596
Job creation scheme	**1.7722**	**1.7151**	**1.6850**	**2.2508**	**1.4818**
Rehabilitation measure	–	0.3156	*1.4364*	0.2399	*0.6264*
Regional Context Variables					
Cluster Ia	Ref.	Ref.	Ref.	Ref.	Ref.
Cluster Ib	**-0.7175**	*0.2881*	-0.3000	**0.6637**	-0.0922
Cluster Ic	**-0.4215**	**0.9103**	**-0.7914**	**0.5424**	**-0.6073**
Cluster II	**-1.8884**	**0.8778**	–	0.6829	**0.7615**
Number of Observations	65143	64363	60196	65020	65759
Log-Likelihood	-4171.0	-2196.1	-1050.4	-2154.7	-4612.0
R-2	0.141	0.126	0.223	0.133	0.088
F-Test	1365.7	631.7	604.1	662.5	886.0

Bold letters indicate significance at the 1% level. *Italic* letters refer to the 5% level.

[1] DoR = degree of restriction.

[2] People with accepted degree of restriction, but no equalisation to other persons with the same DoR.

[3] CSE = Certificate for secondary education

[4] Cluster according to the classification by Blien *et al.* (2004).

Tab. A.8: Estimation Results of the Logit Models for the Propensity Score for Women in East Germany

	Agricul.	Constr. and Industry	Office and Services	Comm. Services	Other
Constant	**-8.3115**	**-7.3101**	**-17.9453**	**-11.0899**	**-7.4834**
Socio-Demographic Variables					
Age	**0.1646**	0.1095	**0.2713**	**0.1896**	**0.1357**
Age^2	**-0.0019**	-0.0012	**-0.0030**	**-0.0021**	**-0.0016**
Married	*0.1734*	0.0965	**0.3118**	**0.1677**	-0.0951
Number of children	-0.0079	0.0391	-0.0247	-0.0443	-0.0068
German	1.2282	0.1296	0.9727	*0.9592*	0.2932
Health restrictions					
No health restrictions	Ref.	Ref.	Ref.	Ref.	Ref.
Acc. DoR[1], 80% and over	0.5151	1.3060	0.4847	**1.2810**	**1.3117**
Acc. DoR, 50% to under 80%	-0.4661	–	**1.4311**	**0.5698**	*0.5660*
Acc. DoR, 30% to under 50%	-0.0995	0.6024	*1.0580*	**0.9809**	*0.7660*
Acc. DoR, 30% to under 50%, no equalis.[2]	-0.4257	–	-0.1513	0.3423	-0.7409
Other health restrictions	**-0.3801**	-0.0696	0.0203	-0.1429	-0.0935
Qualification Variables					
Professional training					
Without compl. prof. training, no CSE	Ref.	Ref.	Ref.	Ref.	Ref.
Without compl. prof. training, with CSE	-0.1973	**-0.7454**	**2.8098**	**1.1480**	**0.4957**
Industrial training	*-0.2955*	*-0.4954*	**3.1291**	**1.1850**	*0.3712*
Full-time vocational school	-0.1436	-0.5663	**3.5078**	**1.9609**	**0.7458**
Technical school	**-1.0249**	-1.0713	**3.8222**	**2.0607**	**1.1572**
Polytechnic	0.1174	–	**4.2966**	**1.8746**	*0.8370*
College, University	-0.6146	–	**4.1203**	**1.6008**	**1.1025**
Occupational group					
Plant cultivation, breeding, fishery	**0.7666**	*0.5567*	**0.8609**	**-0.4426**	*-0.3304*
Mining, mineral extraction	–	–	–	–	–
Manufacturing	Ref.	Ref.	Ref.	Ref.	Ref.
Technical professions	-0.1984	-0.0814	**2.1028**	-0.0027	*0.3317*
Service professions	**-0.6008**	**-0.4644**	**1.7419**	**0.4004**	**-0.2090**
Other professions	*-2.1141*	–	–	*-0.8522*	*-0.9722*
Professional rank					
Unskilled worker	Ref.	Ref.	Ref.	Ref.	Ref.
Skilled worker	**-0.3874**	-0.3283	**0.7162**	**0.2401**	0.1468
White-collar worker, simple occupations	**-1.1101**	-0.7485	**0.8690**	**0.3714**	**0.5205**
White-collar worker, advanced occupations	-0.6226	–	**0.7576**	0.0554	-0.0237
Other	-0.0863	*-0.4287*	**0.6151**	0.1320	**0.2311**
Qualification (with work experience)	-0.0233	0.2537	0.0397	*-0.1753*	*-0.2035*
Career Variables					
Duration of last employment (months)	**-0.0038**	*-0.0036*	**-0.0018**	**-0.0025**	**-0.0032**
Duration of unemployment (weeks)					
Up to 13 weeks	Ref.	Ref.	Ref.	Ref.	Ref.
Between 13 and 52 weeks	0.1846	-0.1683	0.0900	**0.4047**	0.1262
More than 52 weeks	**0.4296**	-0.3131	-0.1725	*0.2016*	0.0354
Number of placement propositions	**0.0720**	**0.0945**	**0.0871**	**0.0844**	**0.0883**
Last contact to job center (weeks)	**-0.0903**	**-0.1270**	**-0.0665**	**-0.0624**	**-0.0412**
Rehabilitation attendant	-0.3401	0.4405	0.1995	*0.3138*	0.0668
Placement restrictions	-0.3940	-0.3174	**-0.6241**	-0.1234	-0.2779
Programme before unemployment					
No further education or programme	Ref.	Ref.	Ref.	Ref.	Ref.
Further education compl., cont. education	**0.3164**	0.1885	**1.0771**	**0.6341**	**0.3466**
Further education compl., voc. adjustment	**0.7365**	**0.8097**	**0.8346**	**0.5587**	*0.3103*
Job-preparative measure	0.7493	–	–	1.1397	–
Job creation scheme	**1.3215**	**1.1128**	**2.0433**	**1.6684**	**1.4558**
Rehabilitation measure	0.7830	–	0.5727	0.4027	0.1661
Regional Context Variables					
Cluster Ia	Ref.	Ref.	Ref.	Ref.	Ref.
Cluster Ib	**-0.6175**	*-0.3887*	0.1607	**0.1800**	**-0.3009**
Cluster Ic	**-0.4307**	*-0.5747*	*0.2994*	-0.0548	**-0.8413**
Cluster II	**-2.9446**	-0.2383	-0.6426	**0.4739**	-0.0499
Number of Observations	77456	70413	75868	78280	77777
Log-Likelihood	-4602.3	-1224.2	-3112.0	-7635.1	-6387.1
R-2	0.129	0.080	0.163	0.113	0.089
F-Test	1360.2	214.3	1210.6	1944.0	1257.2

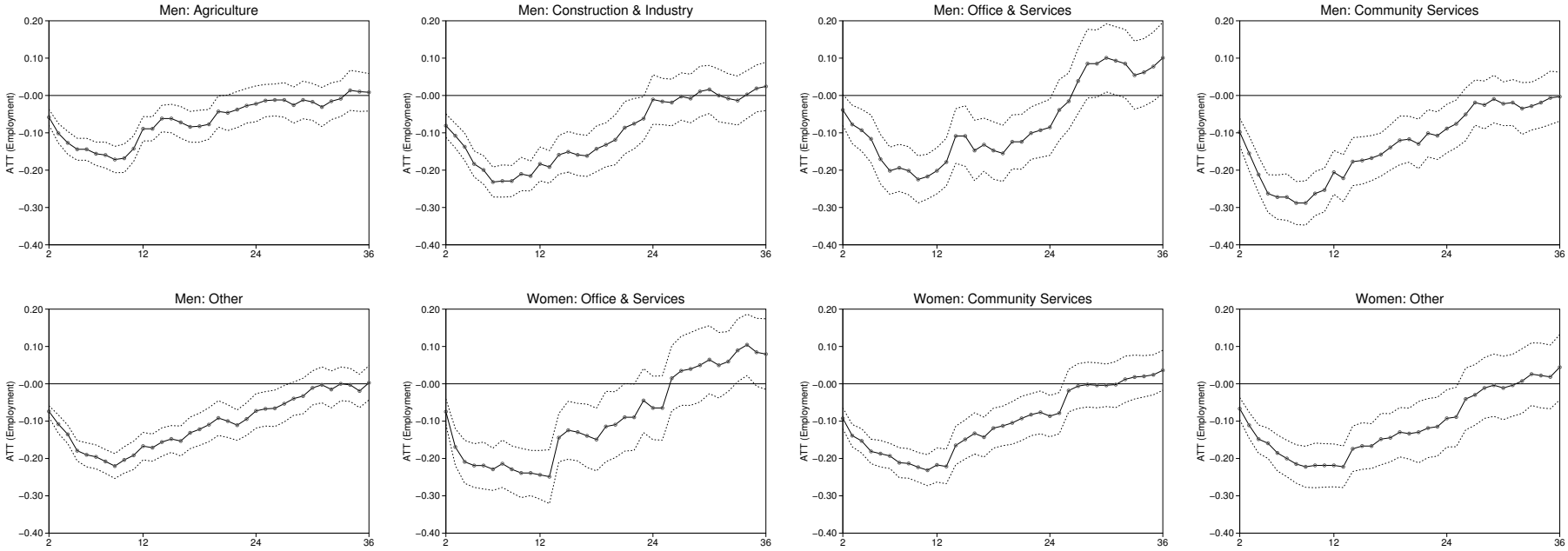
Bold letters indicate significance at the 1% level. *Italic* letters refer to the 5% level.
[1] DoR = degree of restriction.
[2] People with accepted degree of restriction, but no equalisation to other persons with the same DoR.
[3] CSE = Certificate for secondary education
[4] Cluster according to the classification by Blien *et al.* (2004).

Tab. A.9: Number of Treated Individuals Lost Due to Common Support[1]

	Agriculture			Construction and Industry			Office and Services			Community Services			Other		
	Before Matching	After Matching	Lost in %	Before Matching	After Matching	Lost in %	Before Matching	After Matching	Lost in %	Before Matching	After Matching	Lost in %	Before Matching	After Matching	Lost in %
West Germany - Men	584	583	0.17	371	371	0.00	131	129	1.53	320	316	1.25	734	731	0.41
Provider															
Public	335	334	0.30	–	–	–	–	–	–	–	–	–	203	201	0.99
Non-Commercial	238	238	0.00	265	264	0.38	–	–	–	255	254	0.39	471	469	0.42
Type of Promotion															
Regular	382	382	0.00	234	234	0.00	126	125	0.79	220	218	0.91	522	520	0.38
Enforced	202	200	0.99	137	137	0.00	–	–	–	–	–	–	212	208	1.89
West Germany - Women	–	–	–	–	–	–	202	201	0.50	503	497	1.19	270	270	0.00
Provider															
Public	–	–	–	–	–	–	–	–	–	130	126	3.08	–	–	–
Non-Commercial	–	–	–	–	–	–	–	–	–	367	362	1.36	191	191	0.00
Type of Promotion															
Regular	–	–	–	–	–	–	181	179	1.10	373	371	0.54	208	208	0.00
Enforced	–	–	–	–	–	–	–	–	–	130	111	14.62	–	–	–
East Germany - Men	925	925	0.00	416	416	0.00	202	201	0.50	410	407	0.73	971	971	0.00
Provider															
Public	278	278	0.00	182	180	1.10	–	–	–	–	–	–	192	192	0.00
Non-Commercial	610	610	0.00	208	208	0.00	125	124	0.80	331	328	0.91	732	732	0.00
Type of Promotion															
Regular	224	224	0.00	–	–	–	112	110	1.79	249	248	0.40	269	269	0.00
Enforced	701	701	0.00	336	336	0.00	–	–	–	161	161	0.00	702	702	0.00
East Germany - Women	986	985	0.10	193	193	0.00	645	644	0.16	1810	1810	0.00	1401	1398	0.21
Provider															
Public	318	318	0.00	–	–	–	277	277	0.00	443	443	0.00	320	320	0.00
Non-Commercial	635	635	0.00	121	121	0.00	333	332	0.30	1322	1321	0.08	1000	998	0.20
Type of Promotion															
Regular	243	242	0.41	–	–	–	399	399	0.00	1089	1089	0.00	581	579	0.34
Enforced	743	743	0.00	145	145	0.00	246	246	0.00	721	720	0.14	820	820	0.00

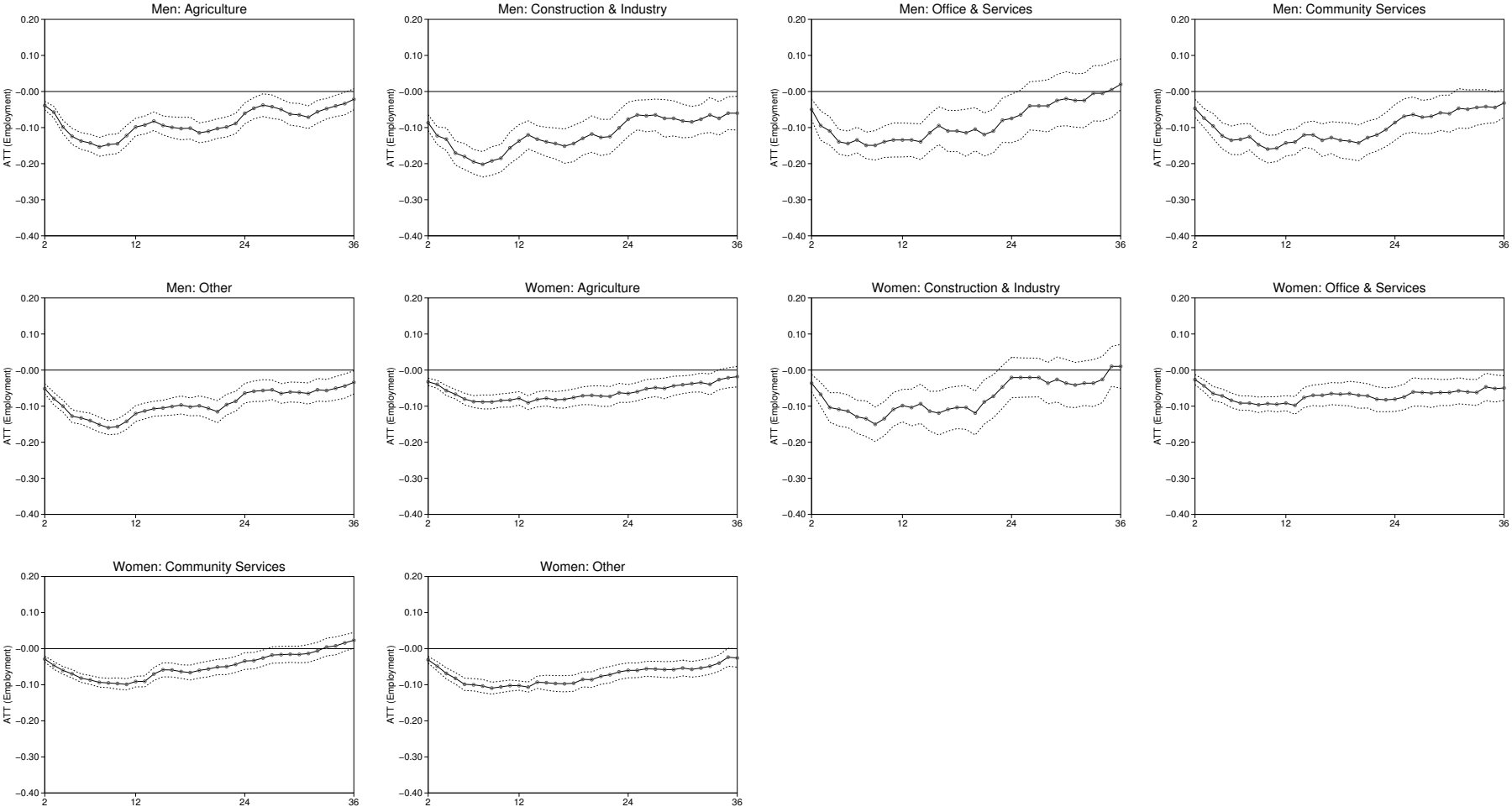
[1] Results refer to a NN matching without replacement and a caliper of 0.02.
– Groups with less than 100 participants are omitted.

Fig. A.1: Sectoral Employment Effects in West Germany (February 2000 - December 2002)[1,2,3]



[1] Solid line describes the monthly employment effect. Dotted lines are the upper and lower 95% confidence limits.
[2] Month 2 refers to February 2000, month 12 = December 2000, month 24 = December 2001, month 36 = December 2002.
[3] Effects for groups with less than 100 participants are omitted.

Fig. A.2: Sectoral Employment Effects in East Germany (February 2000 - December 2002)[1,2,3]



[1] Solid line describes the monthly employment effect. Dotted lines are the upper and lower 95% confidence limits.
[2] Month 2 refers to February 2000, month 12 = December 2000, month 24 = December 2001, month 36 = December 2002.
[3] Effects for groups with less than 100 participants are omitted.

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